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FORTNIGHTLY NEWSLETTER

205th Edition 1st to 15th May 2024

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Dairy Pulse 205th Edition
(1st to 15th, May 2024)

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BLOG

HARVESTING HEALTH: REVOLUTIONIZING LIVING SPACES WITH URBAN FARMING IN DELHI NCR

May 15, 2024
https://dairynews7x7.com/harvesting-health-revolutionizing-living-spaces-with-urban-farming-in-delhi-ncr/

Recently we came across numerous media feeds on Delhi High court taking cognisance of providing safe milk to the urban population in Delhi NCR region.

State of Peri-urban dairy farming in Delhi NCR

Observing that "citizens are consuming" milk products "which may not be very safe", the Delhi High Court said it will set up a "pilot project" in Madanpur Khadar Dairy — one of the nine designated dairies in the city — to address issues such as the use of "spurious" banned drugs like Oxytocin which increases milk production, cattle health, and hygiene at the premises. A division bench led by Acting Chief Justice Manmohan and Justice Manmeet Pritam Singh Arora responded to a petition on the conditions of dairy colonies by pledging to issue an order and establish a team, including the Delhi State Legal Services Authority, to ensure immediate compliance.

The bench noted that the designated dairies in the city lack mandatory licenses from various authorities including the MCD, Delhi government's animal husbandry department, DPCC, and FSSAI.

Delhi's Chief Secretary Naresh Kumar, along with senior officials like the MCD Commissioner, participated in the virtual hearing, committing to file a detailed affidavit outlining a roadmap to address the issues raised. Regarding the relocation of two dairies near Ghazipur and Bhalswa landfills, he expressed land availability constraints and proposed a timeline for legacy waste removal by 2026.

The bench expressed skepticism about the administration's previous inaction, highlighting the existence of unregulated dairies and their potential impact on food safety. It emphasized the need for statutory oversight of these dairies, calling for action from authorities like the MCD and GNCTD.

Functional Plan for Dairy in NCR by NCRPB

It was also observed that the National Capital Region Planning Board (NCRPB) under the Ministry of Housing and Urban Affairs is also developing a functional plan on dairy requirements of this region under NCR regional plan 2041. We must not forget that NCR is expected to be the world's most populous capital region by 2030–2031.

The approach to prepare the Functional Plan shall be broadly including

1. Proposal development, feasibility assessment, and necessary restructuring to enhance Quality of Life and Ease of Doing Business or improve the economy, depending on whether the project is social or economic in nature.
2. Market analysis, supply chain evaluation, and recommendations for increasing farm incomes in the NCR, exploiting the dairy sector's potential near mega cities, and planning for potential exports after meeting local NCR demand.

In this article we shall examine the plausibility for inclusion of urban farming including animal husbandry in the masterplan 2041 for the Delhi NCR.

Urban farming-emerging trends and scope

In a seminal research paper with the above captioned title, the authors, Maneesha et al in Indian Farmers discussed in detail the importance of creating farming opportunities in Urban areas.

Urban farming involves growing plants and raising animals and fish in urban and peri-urban areas. With 55% of the world's population currently residing in urban areas and projected to reach 68% by 2050, urbanites heavily rely on market food, leading to health issues like malnutrition, diabetes, and obesity. Market produce often contains harmful chemicals, prompting a preference for safe organic options. Urban agriculture, practiced at various scales, utilizes local resources to produce a variety of crops, livestock, fish, and honey. Approximately 800 million urban dwellers worldwide, comprising 10.38% of the total population, engage in urban farming to address these three benefits.

1. **Health and Nutritional Benefits:** Urban farming ensures food and nutrition security by providing fresh, organic produce directly to consumers, meeting recommended dietary guidelines. Engaging in agriculture activities promotes physical and mental health, bridging the gap in per capita consumption of fruits and vegetables in India.
2. **Socio-economic Benefits:** Urban farming reduces expenses on food and healthcare while contributing to family income. Community farming fosters social bonds among residents, enhancing societal well-being. Community gardens serve as leisure spaces and venues for community events, promoting cohesion.
3. **Environmental Benefits:** Urban farming mitigates heat, dust, and pollutants, improving air quality and livability. The presence of pollinating insects and birds enhances biodiversity. Biodegradable waste is recycled into fertilizers, supporting sustainable farming practices and waste management.

Unique dairy farming model in Mexico and Ethiopia

Felix et al.'s paper in Sustainability examines urban dairy production in two areas of Mexico City with differing urbanization levels (east and south). Dairy activities have adapted to urban conditions, with production often serving as the primary income source in the east and more diversified livelihoods in the south. Food waste is utilized in the east, while grass remains important in the south. Direct sales to consumers are common in the east, while intermediaries play a larger role in the south. Herds are larger and more specialized in the east. Both areas utilize local resources for housing and feeding animals, with manure used in agricultural systems. The paper discusses policy options to reduce Mexico City's dependence on imported milk by supporting these urban dairy systems.

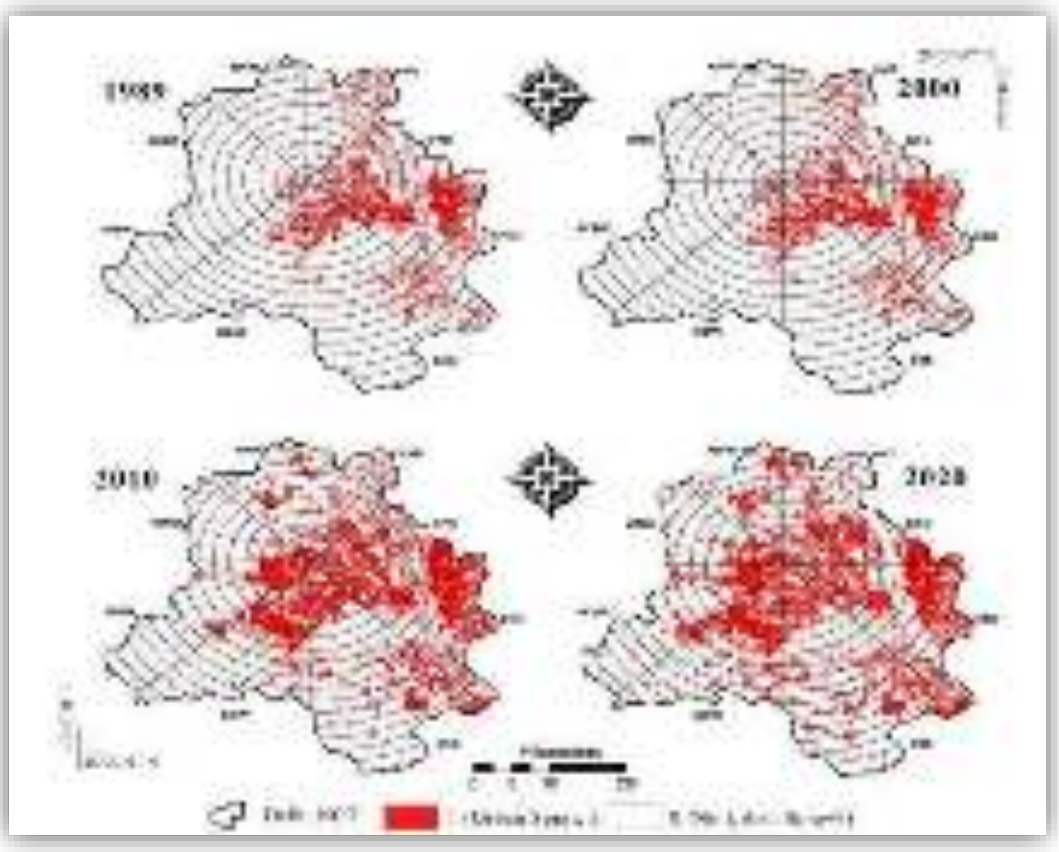
As per Eine in Development Southern Africa, demand for dairy products is growing fast in urban areas in Ethiopia. Due to poorly developed rural infrastructure, urban dairy farms are pivotal in making milk available and affordable in towns and cities. Yet current supply fails to meet the increasing demand.

In order to formulate fit interventions that can expand urban dairy production, a detailed understanding of urban dairy systems is needed. Large discrepancies were observed in terms of dairy enterprise's productivity, profitability, and suitability in future urban policy planning. So suitable and sustainable dairy farm structures were needed to be identified for a robust urban dairy production ecosystem.

Urban housing growth in Delhi NCR

As per Economic Survey of Delhi 2022-23, Delhi, with the highest population density of 11,320 persons per sq km in 2011, is predominantly urban, with 75% of its total area falling under urban jurisdiction. The urban population density stands at 14,698 persons per sq km. Approximately 16.37 million people, constituting 98% of Delhi's total population, reside in urban areas. This urban density exerts immense pressure on public service delivery and civic infrastructure, including water supply, sewerage, solid waste management, and housing. Approximately one-third of Delhi's population lives in substandard housing, including slums, unauthorized colonies, and dilapidated areas. Projections indicate a need for 2.4 million new housing units by 2021, with 54% required for economically weaker sections and lower-income groups. Around 42% of these units are needed for residential areas.

The trend of urban expansion in Delhi from 1989 to 2020 can be seen as below.



Urban Farming the need of the hour

Urban farming has emerged as a promising solution to address food security, environmental sustainability, and community resilience in rapidly expanding urban landscapes of Delhi NCR. In the context

of housing societies in India, the integration of dairy farming alongside vegetable cultivation and efficient organic waste management presents a compelling vision for the future.

In envisioning the inclusion of dairy farming in urban housing societies, several factors need consideration. First and foremost, space constraints demand innovative solutions such as vertical farming or rooftop installations for dairy operations. Additionally, advancements in urban agriculture technologies, such as automated feeding and milking systems, can streamline operations within limited spaces.

Regulatory frameworks play a pivotal role in shaping the feasibility and sustainability of such initiatives. Policies need to be formulated to address zoning regulations, waste management protocols, and animal welfare standards. Clear guidelines on the disposal of organic waste, particularly dung from dairy operations, are essential to prevent environmental pollution and ensure efficient resource utilization.

Organic aspect of urban farming

Integrating dung into the agricultural cycle as organic fertilizer holds significant potential. By composting dung and other organic waste, housing societies can create nutrient-rich soil amendments for cultivating vegetables and other crops. This closed-loop approach not only reduces reliance on synthetic fertilizers but also mitigates the environmental impact of waste disposal.

Moreover, community engagement and education are crucial for the success of urban farming initiatives. Residents need to be sensitized about the benefits of sustainable farming practices, waste segregation techniques, and the importance of local food production. Collaborative efforts involving residents, local authorities, and agricultural experts can foster a culture of environmental stewardship and self-sufficiency.

The future regulatory norms

In light of these challenges, it is imperative for policymakers across various sectors such as Health, Urban Development, Water Resources, Renewable Energy, Environment, Agriculture, and Dairying to collaborate and enact regulations mandating the incorporation of urban farming initiatives into all present and future projects. These concerted efforts have the potential to foster sustainable housing societies and residential complexes, ensuring captive production of fresh food products including milk, vegetables, fruits, indoor plants, and flowers. By bringing communities closer to nature and promoting healthier lifestyles, such initiatives pave the way for a brighter, more sustainable future.

In conclusion, the future of urban farming in Indian housing societies holds immense promise, encompassing dairy farming alongside vegetable cultivation and effective waste management. Through strategic planning, regulatory support, and community participation, housing societies can transform into vibrant hubs of sustainable agriculture, nurturing both people and the planet.

Its my dream to see housing societies being sold in the future highlighting captivating slogans like .. Healthy homes…Nutrition at your door steps…We have larger farms than the clubs …. Natural Food course instead of a golf course…..

Please share your ideas in this regard in the comments section.

Dairy Market Prices

Dairy Commodities

Commodity	Qty.(MT)	₹/Kg*
SMP	[illegible]	[illegible]
Butter	[illegible]	[illegible]

Source

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INDIAN NEWS

BUTTERMILK TO ICE CREAM BY DAIRY BRANDS ARE CAPITALISING ON THE SUMMER BOOM

May 15, 2024

https://dairynews7x7.com/buttermilk-to-ice-cream-by-dairy-brands-are-capitalising-on-the-summer-boom/

As mercury levels soar and heat wave conditions grip various parts of India, beverage and dairy companies are experiencing a welcome boost in sales. The scorching weather may be a challenge for many, but it's proving to be a boon for businesses dealing in thirst-quenching beverages, curd, buttermilk, and ice creams.

According to Jayen Mehta, Managing Director of Amul, the leading dairy cooperative in India, the growth in sales has been remarkable, reaching up to 30%. Specific regions such as Uttar Pradesh, East India, South India, and Maharashtra are witnessing even higher growth rates ranging from 35% to over 50%.

Manish Bandlish, managing director of Mother Dairy, echoes this sentiment, highlighting that the summer season has been exceptionally favourable for the industry, with sales skyrocketing by over 40% in many product categories.

Mother Dairy, established under the initiative of 'Operation Flood', has played a vital role in making India self-sufficient in milk production. Today, Mother Dairy offers a diverse range of products including milk, cultured products, ice creams, and more, under its trusted brand.

Bandlish also highlighted the importance of innovation in meeting consumer preferences, by stating, "People are looking at a lot of innovation. People are looking for any organisation to give them some exciting new products. So when we look at our new launches, for example, it's a combination of Indian flavours, coupled with some international flavours.

There is a market for youngsters who want something very exciting, so we give them a new international flavour. Some traditional people want to continue with the same Pista Kulfi and all that, so we definitely want to give them the right product. So it's a combination of both that we do."

Meanwhile, Amul recently announced its expansion into the US market by introducing a range of milk variants to cater to the Indian diaspora and Asian communities. Jayen Mehta stated that Amul's fresh milk products including Amul Gold, Amul Shakti, Amul Taaza, buttermilk, curd, paneer etc will be available soon to customers in the US.

He also highlighted that protein-rich offerings, organics, and probiotics will be the growth drivers for Amul going ahead.

GCCI PUSHES FODDER CULTIVATION AMONG DAIRY FARMERS

May 13, 2024
https://dairynews7x7.com/gcci-pushes-fodder-cultivation-among-dairy-farmers/

With the aim of increasing milk production in the state the GCCI conducted a training workshop for dairy farming to encourage them to take up fodder cultivation both as sole crop and as an intercrop in a coconut plantation.

Orlando Rodrigues chairman, agriculture committee, GCCI explained the outreach programme under the GCCI Krishi Sampark Abhiyaan. The training is aimed at bringing together dairy farmers and coconut growers to grow fodder for sale to dairies in which are facing a dire shortage of fodder, he said.

"Of the 3 lakh litres per day milk requirement only one lakh litre is produced in Goa and the balance is sourced from neighbouring states. The Goan yield of milk is dropping day by day due to high cost of fodder. In every rupee earned by the farmers 72 paise is used for fodder and the other costs had to be borne in the balance 28 paise which is uneconomical," pointed out Rodrigues.

Green cattle fodder is not available in Goa and the landed cost from neighbouring states is almost Rs 9 per kg. Rodrigues urged farmers to grow fodder in vacant spaces in their farms the cost of which is only Rs 2.50 per kg.

"In one acre it is possible for a net income of Rs 1,20,00 in the first year ,double in the second year and further more in the third year. A special fodder grass has been developed which can grow 3 mts tall and can be harvested for three years. Growing fodder will help in increasing farmer income and also make milk production viable to dairy farmers. It is the easiest of the cash crops which can be grown in Goa," said Rodrigues.

As part of the Krishi Sampark Abhiyaan the GCCI felicitated successful farmers in the state. Earlier during the event the chief guest, Pratima Dhond congratulated all the state awardee farmers for their achievements through dedication, hard work, and unwavering commitment to agriculture. Farmers have contributed significantly to the prosperity of our state. Young awardees must be congratulated for taking up agriculture and not depending on jobs. In fact farmers are creating jobs," she added.

Sanjay Amonkar, director- general GCCI, welcomed the gathering and Ambika Dhakenkar, deputy director proposed the vote of thanks. Dr. Raghunath Dhuri, Miguel Braganza and Sanjay Alberto, director Timblo Farms also spoke on the occasion

The farmers were felicitated in a function at Satixa Farms, Sanguem. The felicitated farmers include Krishi Ratan Hemant Sawant, Krishi Vibhushan Mahesh Gaunker, Krishi Bhushan Dayanand Fal Dessai and Krishna Gaonkar recipient of Fr Inacio Almeida Award

REVOLUTIONIZING INDIAN DAIRYING: 10-POINT WISHLIST FOR INDIA@2047

May 13, 2024

https://dairynews7x7.com/revolutionizing-indian-dairying-10-point-wishlist-for-india2047/

By popular demand, DairyNews7x7 proudly presents our inaugural feature on the Indian dairy sector! Delve into the critical issues demanding urgent attention from policymakers. With elections underway, it's paramount that these key points resonate with all, shaping a formidable agenda for the incoming government to ensure the continual advancement of India's dairy industry.

https://youtu.be/dXHfDchHTHg

Currently, India produces 230 million metric tons (MMT) of milk, accounting for nearly one-fourth of the world's total production. Looking ahead, conservative projections indicate that India's milk production will surpass 600 MMT within the next 25 years, constituting nearly half of the global production by 2047.

To ensure sustainability and meet these ambitious targets, the dairy industry is advocating for purposeful reforms. Amid ongoing elections, Kuldeep Sharma presents a 10-point wish list to the incoming government, aiming to position India as the foremost milk producer globally by 2047.

Do share your wish list of areas in which you want us to make well researched knowledgeable dairy features.

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FOOD LABELS MISLEADING, INDIA'S NEW DIETARY GUIDELINES WARN-ICMR

May 13, 2024
https://dairynews7x7.com/food-labels-misleading-indias-new-dietary-guidelines-warn-icmr/

The recently released dietary guidelines by the Indian Council of Medical Research (ICMR) warned that the information presented on packaged food can be misleading.

"Health claims on packaged food are designed to catch the consumer's attention and convince them that the product is healthy," the guidelines drafted with the help of the National Institute of Nutrition (NIN) informed.

A notable example in the advisory was 'sugar-free foods' associated with low calories, preferred by diabetics or people watching their weight. The document titled Dietary Guidelines for India 2024 released May 8, 2024 warned:

Sugar-free foods may be loaded with fats, refined cereals (white flour, starch) and even hidden sugars (maltitol, fructose, corn syrup, molasses). These would imply high glycaemic index and high calories in the food item.

Food products often loosely state they are "all-natural", the health research organisations stressed. On the contrary, they could have added flavours or substances, with minimal processing, they added. Manufacturers can see through this and identify a few natural ingredients when they see this displayed on the label, the authors of the document explained.

Another popular claim, they observed, was on the proportion of the nutrient offered in a single serving of a product marketed as a "good source of protein, vitamin D or other nutrients''. To make an accurate judgment, the doctors suggested that people should read about the quantity of these nutrients with reference to daily requirements.

Further, not all organic food claims should be believed, the guidelines reminded. "When a food label states 'organic', it may simply mean that it is free of all artificial preservatives, flavours and colours, and that the food ingredients are free from pesticides and chemical fertilisers. If both the above are met, then the label can state 100 per cent organic and have the 'Jaivik Bharat' logo approved by Food Safety and Standards Authority of India (FSSAI)," the authors noted.

Any food item, including fruit juices containing only 10 or less per cent of fruit, is allowed to display that the product is made with real fruit pulp or juice, according to FSSAI. "But the product claiming to have real fruit may have added sugar and other additives with only 10 per cent actual fruit pulp," the researchers added.

All oils are 100 per cent fat and, therefore, should be consumed in moderate quantities. Still certain oils claim to have no cholesterol or are heart friendly on the label, the document warns.

Among the 17 dietary guidelines, ICMR asked consumers to read information on food labels

to make informed and healthy food choices. It also suggested minimising the consumption of high fat, sugar, salt and ultra-processed foods.

The World Health Organization is considering revising its recommendation and reducing calories from sugar to less than five per cent kilocalories a day, according to ICMR. “If possible, added sugar may be completely eliminated from one’s diet as it adds no nutritive value other than calories. Calories are healthy only when accompanied by vitamins, minerals and fibres,” the scientists stressed.

R Hemalatha, director of NIN told Down to Earth (DTE), “If you consume sugar, at least try to restrict it to around 30 grams a day. If you don’t take sugar, it’s good for health. As much as possible, avoid sugar, especially for children younger than two,” she said. “Totally avoid sugar and make recipes without sugar if possible.”

If consumed long-term, ICMR-NIN authors said, sugar substitutes such as sweetening agents like aspartame, and saccharin, can lead to obesity, diabetes, hypertension and other non-communicable diseases. “Sugar substitutes can be harmful to your body if it is consumed regularly in high quantities,” Hemalatha told DTE.

ICMR also said that fortification of ultra-processed food cannot make them wholesome or healthy, which is a technique used to add certain nutrients to unhealthy food.

“High fat foods and high sugar foods are energy dense (high calorie foods and poor in vitamins, minerals & fibre). Regular consumption of these foods not only causes overweight and obesity but also deprives one from taking healthy foods that provide essential macronutrients (amino acids and fats), fibre and micronutrients such as vitamins, minerals, phytonutrients, bio-active substances,” the research body said.

Around 56 per cent of India’s total disease burden is due to unhealthy diets, studies showed. Healthy diets and physical activity can reduce a substantial proportion of coronary heart disease and hypertension and prevent upto 80 per cent of type 2 diabetes, ICMR highlighted.

The scientists who drew up the dietary guidelines also advised against consuming high quantities of protein, especially in the form of protein supplement powders, as commonly practiced by athletes. “Protein requirement is based on your body weight. It is neither gender-specific nor physical activity-specific. Going overboard on protein is not right. I mean it is not going to help your muscle building at all. You have to be physically active instead.” Hemalatha said.

THIS SUMMER, ICE CREAM COS TO SCOOP OUT 30% MORE SALES

May 11, 2024
https://dairynews7x7.com/this-summer-ice-cream-cos-to-scoop-out-30-more-sales/

Sizzling temperatures across the country have caused the demand for ice-creams to skyrocket, with the manufacturers and associations predicting a 30 percent growth in sales this financial year. "Usually the ice cream market in India grows at 12-15 percent every year. This year has started with a bang. With the summer temperatures peaking at many places, the sale of ice creams of most of the brands are expected to see a growth of 20-30 percent," said RS Sodhi, President of Indian Dairy Association (IDA), the apex body of the dairy industry in India.

The summer months between April and June contribute to 50 percent of the annual sales for most ice cream manufacturers in India. Unseasonal rains during the summer months last year adversely impacted the sales. This year the scales have tilted in the favour of the ice cream manufacturers.

Hocco ice-creams, the newest ice-cream brand from Gujarat is operating its ice cream unit at 120 percent of its capacity to meet the summer rush. "We are a new company. We started in October 2023. We are currently selling over 50,000 litres of ice-cream every day. About 98 percent of this is being sold in Gujarat, while some in Mumbai and Delhi. We are now starting in Bengaluru and Hyderabad," said Ankit Chona, managing director of the company which floated the Hocco brand after it sold the "Havmor" brand of ice creams to a South-Korean Lotte Confectionery in 2017.

Hocco operates an ice-cream unit at Bavla near Ahmedabad. "By next year, we will be quadrupling our capacity from the current 40,000 litres," Chona said, adding that the company has been registering a 50 percent monthly growth in sales.

The Indian ice cream market's size is around ₹16,000 crore, of which ₹11,000 crore comes from the organised segment comprising 125-odd small and big ice cream brands, with Amul being the largest of the lot. "While national brands are growing, a number of small ice cream brands have popped up in each city. These brands are also getting very good traction, especially in rural and tier-III markets," says Sodhi.

Low input costs

Experts also point out that the ice cream brands have not increased the prices this year. "This year the prices of milk solids including SMP, white butter and packaging costs have decreased by 20 percent compared to last year. So this year, no brand has increased the cost of ice creams. Generally, they increase their prices between January and March," Sodhi said, adding that the decreased costs of inputs have given the ice cream brands a lot of elbow room to increase their advertising spends.

Chona from Hocco ice-creams pointed out that apart from cocoa, the prices of all the inputs for the ice cream industry have remained "stable". Eyeing more than 30 percent growth in the ice-cream business this year, Amul has also commissioned about six new ice cream plants, taking the total number of ice cream manufacturing units to 25.

Another popular ice cream brand, Vadilal Enterprises, has been operating its ice cream plants at Gandhinagar and Uttar Pradesh at more than 100 percent capacity this summer. “The ice cream sales have been good this summer. We are already seeing a 15 percent growth,” said Devanshu Gandhi, promoter of Vadilal Industries.

While ice-creams are popular across the country, States in the West, North and South contribute the maximum to sales in the country. “Among the ice creams, kulfis are seeing tremendous acceptance in the Indian market. There are brands which are making record sales in kulfis,” Sodhi from IDA added.

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SHREEJA WOMEN'S INITIATIVE: PROVIDING RELIEF TO WOMEN DAIRY FARMERS AMID HEAT STRESS

May 11, 2024
https://dairynews7x7.com/shreja-womens-initiative-providing-relief-to-women-dairy-farmers-amid-heat-stress/

- Dairy farmers in Chittoor, known for its high milk production, are facing challenges due to extreme heat, which reduces milk output.
- Amid the challenges, a women-led initiative is helping the women farmers increase their income from the dairy business while addressing heat and fodder-related issues.
- With a women-centric supply chain, Shreeja offers purchasing milk at fair prices, supplying high-quality fodder, and providing access to veterinary doctors which support the dairy farmers in this drought-prone district.

On a hot day in late April, with the temperature reaching 43.2 degrees Celsius, M. Thayaramma, fetched pots of water from a nearby well. She washed her two cows in a shed just outside her home, located in the village of Atlavaripalli in Chittoor district of Andhra Pradesh. The land near her house, where Thayaramma grows grass for cattle fodder is parched and devoid of life. The air is stiflingly hot and the sky is clear, with no sign of rain-bearing clouds.

Fifty-four-year-old Thayaramma has been a dairy farmer for over three decades and is well-versed in cattle care. But the unrelenting heat has become an increasing challenge, growing worse every year, she feels. The extreme temperatures cause a host of issues in livestock, from mastitis (inflammation of the udder) and dehydration, to fever and heat stroke, all of which reduce milk production. "Daily milk production has dropped by twenty percent in the past month," she says, noting that she's been washing her animals and providing them with water more frequently than usual to mitigate the effects of the heat. This reduction in yield typically happens in May and June.

Thayaramma is among the lakhs of dairy farmers in the Chittoor district. These farmers face a critical battle against heat stress, compounded by the scarcity of green fodder and water, which will likely continue for the next three months.

K. Ramanarao, a 50-year-old dairy farmer from Kannikapuram in Chittoor, has seen his daily milk yield from five cows drop from 50 litres to 35 litres. "Summer means more work and no profits for dairy farmers. To make matters

worse, wholesale milk prices are low and there's no support from the state government," Ramanarao said. Another dairy farmer, 55-year-old K. Sriram from Velkur village, also in Chittoor district, sold his two cows in April and migrated to Bengaluru's Naganahalli with his family to work as an agricultural labourer. Since Chittoor is located close to Bengaluru and Chennai, farmers move to the cities in search of better livelihood. "What else can we do? It is not like there are better employment opportunities in the district. We don't have renowned factories here and most of the development is focussed on Tirupati, the neighborhood pilgrim district," said Sriram.

Weather extremes making the dairy sector vulnerable

Andhra Pradesh ranks fifth in total milk production in India, and Chittoor is one of the state's main dairy farming districts. Over the last few decades, Chittoor has undergone significant changes, including a shift in preference from buffaloes to cows. The proportion of cows in the district has risen from 8.56 lakh in 1999 to 9.60 lakh in 2017, while the number of buffaloes has declined from 1.44 lakh in 1999 to 0.88 lakh in 2017.

One of the major challenges Chittoor faces is its location in the Rayalaseema region, a drought-prone area with significant water scarcity. Rayalaseema, located in the southern part of Andhra Pradesh and sharing borders with Tamil Nadu to the south, Karnataka to the west, and Telangana to the north, experienced 15 drought years between 2000 and 2018. The drought in 2023 was the worst in over a decade and a half.

Now, in 2024, farmers in the region continue to face heat-related challenges. The El Niño effect and shifting wind patterns have led to harsher summers. Chittoor is experiencing above-normal temperatures, contributing to increased heat stress on dairy animals.

S. Karuna Sagar, a scientist at the India Meteorological Department in Amaravati, remarked that temperatures are breaking new records annually. "Due to the impact of El Niño, we expect high temperatures for the next two months," he said, adding that the Animal Husbandry Department has issued an advisory to ensure keeping cattle cool by frequent wetting of cattle with water, during the summer.

Dairy farmers have expressed concern about cattle mortality due to heat stress and the associated costs of frequent veterinarian visits. Studies show that heat stress can reduce milk yield due to increased respiration rate, rectal temperature, and heart rate, affecting feed intake and, consequently, milk production.

Given these challenges, farmers are seeking government assistance. More than a decade ago, the United Andhra Pradesh government constructed sheds and supplied water and dry fodder to support dairy farmers, providing relief, locals claim. Dairy farmer Ramanarao recounted how he used to take his cows to a shed in L.B. Puram that housed 300 cattle for about three months. Veterinary doctors would visit regularly to ensure the cattle weren't suffering from heat stress.

However, the farmers complain that no such support exists now. In 2021, the Animal Husbandry Department announced a similar initiative to combat drought, but it was not initiated in Chittoor, farmers claim.

An official from the Animal Husbandry Department in Chittoor, speaking on condition of anonymity, said, "Due to the election code, no schemes are in place." Yet, dairy farmers claim there have been no schemes since the present government came to power in May 2019. The official declined to comment further when asked about the farmers' complaints.

T. Narasimhulu, a 50-year-old dairy farmer, said that the only benefit he received in the past five years was a grass-cutting machine. "During summer, the government used to provide silage and dry fodder. But that hasn't happened in the past five years," Narasimhulu noted.

A women-led intervention

As heat stress exacerbates the challenges faced by dairy farmers, Thayaramma and others are finding relief through support from the Shreeja Mahila Milk Producer Company Limited (SMMPCL), the world's largest women-owned and women-managed dairy company.

"Regular health camps help sensitise farmers to the harmful effects of heat stress. Veterinarians are available on call, sparing us the trouble of taking our cattle to the hospital for minor ailments," Thayaramma noted. She is a board member and owns 36 shares of SMMPCL, established by the National Dairy Development Board (NDDB) in 2014.

Starting with 27 members in 2014 in Chittoor, Shreeja has expanded to 1.25 lakh members across twelve districts, including Chittoor. With a focus on enhancing women's leadership and empowering them within the dairy sector in a drought-prone region, Shreeja offers numerous benefits, including purchasing milk at fair prices, supplying high-quality fodder, and providing access to veterinary doctors.

Beyond these benefits, Shreeja maintains a women-centric supply chain— from milk pooling to the sale of by-products — granting the women members shareholding and ownership in the company. Its two-tier governance structure comprises village contact groups, each representing seven members and member relations groups based on individual villages. Thayaramma said members can easily raise complaints or concerns with these groups or at milk pooling points.

Shreeja is also replacing plastic milk cans with steel ones and strengthening village contact groups that offer farmers valuable information. The organisation has a wide range of summer management initiatives. "Given the fodder shortage, we supply fodder seeds for free to our members — a kilo costs Rs. 100 in the market," explained Rajendra Babu, Assistant General Manager of Shreeja. Each month, the company conducts at least 200 programmes to educate farmers on managing cattle during the hot season. "Any dairy farmer can access help from our veterinary doctors," Babu added.

Babu further highlighted that Shreeja's mission is to empower rural women, offer competitive prices to dairy farmers, and foster growth in the dairy industry through various measures. Shreeja's members also receive dividends, bonuses, and incentives each year. "Farmers who supply more than 1,000 litres a year get a free five-litre milk can," Thayaramma said.

The International Dairy Federation (IDF), which, in 2023 awarded Shreeja for its approach to promoting women's development, ensuring stability in the dairy sector, and fostering sustainable growth. Based on a survey of 5,000 women members, IDF found that women dairy farmers saw an increase in savings and were also supported to create assets. Since its inception, Shreeja has injected Rs. 36 billion into the rural economy by ensuring all payments go directly into individual bank accounts. Additionally, Rs. 400 million in profits have been distributed among producers. Shreeja aims to incorporate another million women over the next five years, the IDF report says. However, many in Chittoor district are unaware of the initiative. For instance, Ramanarao and Narasimhulu, dairy farmers, told Mongabay India that they would have enrolled their wives as Shreeja members if they had known about it. In response, Babu said, "We are restricted to certain areas due to infrastructure limitations. We will expand to other areas only when market demand increases."

FROM PLENTY TO PARCHED: DELAY IN INCENTIVE RELEASE IN KARNATAKA

May 10, 2024
https://dairynews7x7.com/from-plenty-to-parched-delay-in-incentive-release-in-karnataka/

Ravi., a dairy farmer in Keelara village in Mandya district in the heart of the Old Mysore region, has been able to earn a supplementary income from the cows that he rears and from the paddy he cultivates. However, the long spell of drought since last year forced him to sell two cows about six months ago because fodder has become difficult to procure.

He now has one cow to ensure milk supply to his own family and he is able to sell only a couple of extra litres to the local milk co-operative society. Though he has a borewell, the water yield has reduced so drastically that he cannot even grow green fodder. Purchasing fodder is out of the question because it is too expensive.

There are similar stories across Mandya, Kolar, Tumakuru, and Bengaluru Rural districts, which contribute the bulk of the Karnataka Milk Federation's (KMF) milk procurement, along with Hassan, Mysuru, and Shivamogga districts in the State.

In Karnataka, about 24 lakh dairy farmers are members of village-level milk cooperative societies, and an unspecified number of non-members also rear cows in the State. The Old Mysuru region in south Karnataka has seen growth in milk production since the milk revolution started in the mid-70s. Affected by the vagaries of monsoon in rain-dependent arid and irrigated areas, dairy farming has brought supplementary income to the farming community, and women's participation is also high.

The failed monsoon in 2023, which led to crop loss, has reduced post-harvest hay availability, while water scarcity has prevented farmers from growing green fodder, triggering a shortage of cow feed. Though the State government issued fodder kits containing seeds to farmers as a drought-mitigation measure, farmers complained that without water, the kit remained unused, and the green fodder wilted in many cases.

Karnataka is currently facing the worst drought in the last four decades, with 223 of the 236 taluks in the State being declared drought-hit. While the previous monsoon's bountiful rainfall helped fill lakes and improve groundwater, which sustained farmers' lives, the onset of summer has brought misery to rural households as a large number of water bodies and borewells have dried up or yielded less water.

Delay in incentive release

Added to their problem is the delay in releasing the government incentive of ₹5 per litre. The government released the last tranche in November 2023, and farmers were hoping to use the subsidy, which was expected later, to counter drought-related financial distress.

Since 2008, the State government has been providing incentives to dairy farmers, and the incentive has increased from ₹2 per litre when

it was launched to ₹5 per litre now. The aid has helped draw more farmers to dairy farming, as milk procurement has more than doubled from 2008, when the average daily procurement was 36 lakh kg, to about 81 lakh kg by the end of the 2022-23 financial year.

While the government incentive does not have specific timelines for release, dairy farmers get their regular payment for milk from the KMF through their respective milk unions. Based on the financial strength of the union, the milk procurement price per litre also varies from district to district. This payment comes to farmers fortnightly through direct benefit transfers to their bank accounts.

"A 50 kg bag of dry feed sold by KMF costs ₹1,260. A tractor load of fodder can cost anywhere from ₹5,000 to ₹10,000. Only farmers who have fodder in excess are selling it. The government has delayed subsidy payments. Enough water and fodder are not available. To make matters worse, milk yield from cows has reduced because of heat," Jayakumar, a farmer in Gejjalgere in Mandya, pointed out.

Drying borewells

In arid Kolar, where farmers are even more dependent on dairy farming to boost their income, the drying up of borewells — the only source of water — has added to the misery. A resident of Siddanahalli in Bangarpet of Kolar district, Thulasi Kumar, said he reduced the cattle head from four to two. "Extreme heat has led to low yield of milk from cows, and thereby a drop in income. While I was getting up to 13 litres of milk from a cow, it has dropped to less than 10 litres. I know of many who have reduced their cattle heads like me. On-time subsidy payment would have helped us," he said.

Tumakuru, another district where dairy farming provides supplementary income, is no different. Dairy provided them with a steady source of income during any kind of distress. But that's no longer the case because of scarcity of water and shortage of fodder. Many, like Jayanna, a resident of Belagarahalli in Tiptur, have kept just one cow to provide for only the family's milk needs.

Those who have grown paddy or sugarcane with great difficulty, with water from the few functional borewells, are the ones who are left with hay, which is taking care of fodder needs. However, Panchalingu, a resident of Keregodu, said dry hay alone does not improve milk yield.

Low milk procurement

A 50-year-old, reasonably sized milk cooperative society in the temple town of Melukote, in Mandya district, has been recording low milk procurement since March end. From 14 cans of around 40 litres each, it has come down to eight or nine cans daily.

Those in the know about developments in the dairy industry say farmers began selling cows last year as dairying became unremunerative. One reason was the delay in increasing the procurement price.

KMF has been making multiple proposals to increase the retail price of milk since the BJP government. Finally, in July last year, the current Congress government allowed a hike in retail price by ₹3 per litre in July 2023, most of which is transferred to the farmers.

The BJP government was said to have delayed a price increase during an election year, fearing a backlash from the middle class. KMF sources said it was during that period that farmers resorted to selling cows because of increased input costs and dipping incomes. In July 2023, when the retail price was finally increased, the KMF had justified that despite the retail price hike, milk prices in Karnataka continued to be cheaper than in the neighbouring states.

In contrast to the farmers' claim that the yield from their cows has reduced, the KMF sources say the total procurement across the State has actually increased over the last summer while the number of farmers supplying milk has remained almost the same.

"I have hay from the paddy that I grew last year. However, hay does not help in increasing the milk yield. We are using a combination of hindi (local feed) made from grams, ragi, and other locally available proteins. Feed supplied by KMF has become expensive," he complained. Farmers are selling cow dung to get as much additional income as possible though they will require dung as fertilisers for the coming monsoon, he added.

Dairy farmers like Lakshamma, a resident of Keelara, who do not have land to grow fodder, are dependent on stray fodder available in the village in open fields. But they have now dried up.

"Dairying is an important source of livelihood. I also work as a farm hand. It is difficult to maintain cows without having land. Buying fodder is not financially viable. I graze cows on the fringes of the village with whatever I get." Lakshmamma has three cows, and she said she has asked her two sons to look after one cow each.

KMF has over 24 lakh dairy farmer members across 14,000 milk cooperative societies in the State. According to KMF data, it makes a daily payment of over ₹17 crore. KMF is the second largest dairy cooperative in the country, and in South India, it stands first in terms of procurement as well as sales and milk-based products.

"In fact, we have seen over 4% growth. From 77.5 lakh litres of daily procurement, it has gone up to 82 lakh litres. Once the monsoon starts, we expect the total procurement to be around 95 lakh litres, though we hope to touch the one crore mark."

Dues from previous govt.

KMF sources said they are saddled with arrears. "Dues to the tune of ₹450 crore remains from the previous BJP government. There is also ₹212 crore pending. Both of which add up to about ₹700 crore. This money was given to the farmers in the previous financial year."

Sources cited the election as the reason for the delay. The government released ₹260 crore earlier this week, while ₹700 crore (of the latest tranche) is still pending and will be released in the next quarter.

RAMP UP TESTING OF FOOD PRODUCTS: DELHI HIGH COURT TO FSSAI

May 9, 2024
https://dairynews7x7.com/ramp-up-testing-of-food-products-delhi-high-court-to-fssai/

The Delhi High Court on Wednesday stressed the need to ramp up testing of food products in the national capital to ascertain their quality, saying the food cycle has become "corrupted" and being the apex body, the FSSAI needs to take steps to ensure that there is enough testing.

"The FSSAI needs to ramp up testing. It is minimal. What sort of products are we eating? We do not know. Our food cycle has got so corrupted. You are taking no steps. You are living in some ivory tower. You pick up any food product, there is a problem. There is so much pesticide," the bench, comprising Justice Manmeet P S Arora, said. "You must exercise your supervisory powers. You must ensure enough testing takes place. You are the apex body."

The counsel for the Food Safety and Standards Authority of India (FSSAI) said food testing is carried out by the state food safety commissioners.

Noting that 25 samples per food safety officer (FSO) per month is the prescribed norm for testing, the court remarked that appropriate random testing has to be carried out given the city's population.

"Look at the population of Delhi. How much food consumption is taking place on a daily basis. How many FSOs are there in Delhi? Sampling needs to be ramped up," Justice Manmohan said.

"The commissioner, food supplies is directed to file a personal affidavit indicating level of testing and number of food inspecting teams and the budget of the department," the court ordered as it asked the official to join the proceedings on the next date on August 7. During the hearing, the amicus curiae (friend of court) raised concerns with respect to the use of calcium carbide to artificially ripen mangoes, saying there is nothing on record to show if the required test kits for detecting use of chemicals have been procured by the authorities.

On being told that currently, the cost of testing any food product, which is between Rs 5,000 and Rs 12,000 depending on the product being tested, has to be borne by the individual seeking such a test, the court orally remarked that such a burden has to be borne by the State. "Why should it fall on private citizens? State will pay for it," it said. The court was hearing a suo-motu (on its own) case initiated by it in 2010 following a news report on use of certain pesticides for growing vegetables, which cause serious neurological problems, kidney damage, skin diseases, cancer and such other grievous ailments

AMUL MAY TAKEOVER SANCHI – STATE DAIRY FEDERATION OF MADHYA PRADESH

May 9, 2024
https://dairynews7x7.com/amul-may-takeover-sanchi-state-dairy-federation-of-madhya-pradesh/

Amul is in talks for a possible takeover of Sanchi Dairy – a brand as familiar to Madhya Pradesh homes as Nandini in Karnataka, and just as emotive.

The BJP-led MP govt wants to adopt the Gujarat-based Amul-like model for Sanchi in MP, sources told TOI, adding that whether Amul will 'assist' Sanchi to increase its base in MP or take it over will be decided soon after Lok Sabha polls.

MP govt feels it will be beneficial for the state's dairy farmers. Principal secretary of animal husbandry and dairy department, Gulshan Bamra, told TOI, "A decision on Amul's role in MP for the benefit of milk-producing farmers will be decided by govt soon."

Since Jan this year, several rounds of discussions have taken place between the animal husbandry department and Amul on this. Officials said Amul is keen on a takeover and merger of Sanchi with Amul. However, govt is wary of a Karnataka-kind Amul vs Nandini battle that turned into an explosive political issue during the assembly polls there around this time last year.

On Jan 10 this year, MP chief minister Mohan Yadav took part in a joint meeting of Sanchi and Amul in Ahmedabad to ensure procurement of milk from milk producers of MP and help dairy farmers' interest getting guarded.

At the Ujjain investors' summit in March, the MP govt wanted to enter into an MoU with Amul for collaboration to promote Sanchi. "It couldn't happen, despite last minute efforts, as Amul was not keen on it (collaboration) and MP govt had nothing to offer to get it interested," said an official.

Sanchi is one of MP's best known brands. Run by Madhya Pradesh State Cooperative Federation, it boasts of a range of products from milk and milk products to sweets.

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DELHI HIGH COURT: CITY DAIRIES FAIL STATUTORY COMPLIANCE

May 9, 2024
https://dairynews7x7.com/delhi-high-court-city-dairies-fail-statutory-compliance/

Observing that "citizens are consuming" milk products "which may not be very safe", the Delhi High Court Wednesday said it will set up a "pilot project" in Madanpur Khadar Dairy — one of the nine designated dairies in the city — to address issues such as the use of "spurious" banned drugs like Oxytocin which increases milk production, cattle health, and hygiene at the premises.

Hearing a petition highlighting the conditions of dairy colonies, a division bench of Acting Chief Justice Manmohan and Justice Manmeet Pritam Singh Arora said it shall pass an order and form a team involving the Delhi State Legal Services Authority to bring the dairy under "immediate compliance".

The bench observed that the city's designated dairies are not complying with the statutory framework in as much as they do not have "mandatory" licences from the MCD, Delhi government's animal husbandry department, the Delhi Pollution Control Committee (DPCC), and Food Safety and Standards Authority of India (FSSAI).

Delhi's Chief Secretary Naresh Kumar, who had joined the proceeding through virtual mode along with other senior officials such as the MCD Commissioner, said he will file a detailed affidavit indicating a "road map" to deal with the issues raised.

The HC also questioned the Delhi Police if it has been able to find the source of the problem — where spurious Oxytocin is produced, packaged, and distributed. It orally observed, "If the police is feeling handicapped, then we can hand the matter over to the CBI… This is affecting the food cycle. It affects all young children, babies. Police must show some alacrity." The counsel appearing for the police said FIRs have already been registered and an investigation is underway.

The HC also told the CEO of FSSAI to "ramp up testing in food products" especially those that contain milk. "Testing is very very low. Especially in the Ghazipur and Bhalswa areas, we want you to do far more tests. Give us a report on May 27. Check sweet shops, they must be using a lot of milk produced in these two areas. Please do random sample testing from sweets and chocolates that are being sold in Delhi," the bench told the official.

Shifting two dairies near landfills

With respect to moving two dairies located near the Ghazipur and Bhalswa landfills, the Chief Secretary said the required land is not available for relocation.

"My request is that we make a commitment and give a timeline by which we will be in a position to clear the two landfill sites and… be allowed to continue the dairies at these sites," the senior official said, adding that based on the past year's performance, he is hopeful that

legacy waste will be removed by 2026. He added that multidisciplinary teams shall be formed to tackle the issues raised.

To this, the bench orally remarked, “If you think you can do it good luck to you. Till today, the administration has just turned a blind eye as if these dairies do not exist. We are talking about nine designated dairies right now. How many unauthorised dairies may be there, we aren’t even asking you about that.”

It went on to add: “This is the so-called milk being used in the production of sweets, chocolates, how it is entering our food cycle no one knows… Someone has realised it is impossible to do this, so don’t look at them. Today, these dairies are not being examined by any statutory authority. How are they working in contravention of the law? Whether it is MCD, GNCTD.”

On Oxytocin use, the court said: “We are hearing amazing stories that cattle have been moved to the second floor, and once they move up they do not come down. What cruelty is being met out to them? Oxytocin is rampant over there which is a banned drug. These are all spurious drugs that are being circulated. Please ask your officers what they have done. Some junior officers are getting salaries for working in the area. Some responsibility will have to be fixed, otherwise nothing will happen.”

MERAPASHU360 PROVIDES DOORSTEP DELIVERY OF CATTLE TO FARMERS

May 8, 2024
https://dairynews7x7.com/merapashu360-provides-doorstep-delivery-of-cattle-to-farmers/

MeraPashu360, a startup founded by alumni from IIT Madras, is aiming to cater to the rural landscape in Haryana, Uttar Pradesh, Rajasthan, and Delhi with its doorstep delivery system for cattle and related needs of dairy farmers. The online marketplace introduced by MeraPashu360 allows dairy farmers to buy and/or sell cattle as well as procure cattle feed with just a click, eliminating the hassle of traditional procurement methods. The company ensures the delivery of dairy inputs within a swift 24-hour timeframe.

Niket Agrawal, Co-founder and Chief Executive Officer (CEO), told the Pioneer, "Quality-checked dairy inputs are essential for farmers to ensure the health and productivity of their cattle."

Besides Niket Agrawal, Varun Verma serves the team as its Chief Technology Officer (CTO), Kanupriya Saldi as Chief Operating Officer (COO), and Divyanshu Tambe as Strategic Advisor.

Recognising the vast potential of the rural market, MeraPashu360 focuses on catering to the needs of dairy farmers, who form a significant portion of rural households. With a mobile app, the startup simplifies the ordering process, allowing farmers to select and purchase the required feed with ease.

MeraPashu360: Purchasing And Selling Cattle Made Easy

To sell a cow or a buffalo, a user is asked to fill out a form on the app which includes sharing photos of the cattle and "Enter the expected ask price of your cattle and submit the form to know the best price for your cattle according to the market," as per the page's FAQ section.

To buy cattle, users can go to the 'Explore Cattle' option on the app's homepage to get information on a wide range of options and also see the animal via video call.

"After thorough assessment by an experienced team of MeraPashu360, cow/buffalo are brought to the farm and the team first checks the quality of the cow/buffalo, evaluates the cattle on 75+ parameters and delivers them to you after the cattle passes on each parameter," the page further reads.

The services include Free home delivery service (within a 50 km radius of the farm), Free consultation facility by Vet, and scheduled farm visits to buy cattle.

Niket Agrawal emphasises the company's commitment to social impact, stating, "We are contributing to the upliftment of rural communities by facilitating easy access to quality-assured essential inputs for dairy farmers", as quoted by the Pioneer.

The company also boasts call centre executives who can talk to the farmers in their native language to understand their requirements.

MILKLANE: REDEFINING INDIAN DAIRY WITH TECHNOLOGY AND TRANSPARENCY

May 8, 2024

https://dairynews7x7.com/milklane-redefining-indian-dairy-with-technology-and-transparency/

MilkLane, an innovative dairy unit of agri-tech platform Innoterra, is redefining the way milk is produced, sourced, and delivered. With a focus on quality, traceability, and financial inclusion, MilkLane is bridging the gap between technology and traditional dairy farming.

Quality Assurance: Safe Milk for All

MilkLane's commitment to quality begins at the source. MilkLane is India's first and only supplier of high-quality milk which free of antibiotics and toxins. MilkLane is also unique in its value proposition of Bulk Milk Cooler model, which ensures that the milk is chilled within 45 minutes and delivers MBRT of more than 3 hours for 100% milk. Through the tech-enabled product iDairy, MilkLane achieves traceability by providing customers and consumers with access to source and testing data. This transparency builds trust and ensures that consumers receive high-quality milk. Speaking about the quality parameters, Harish Sharma, Managing Director of Dairy business at Innoterra says: "We have over 30 quality parameters for the milk we accept from the farmers. This ensures consistent quality of milk, which is necessary for many processed milk products such as infant formulations, cultured milk products, UHT milk and more. As a result, our buyers can eliminate quality-related issues and costs associated with poor or rejected products. Milk products made with MilkLane can achieve better quality and longer shelf life."

Empowering Farmers: Financial Inclusion

MilkLane's impact extends beyond the dairy itself. They collaborate daily with more than 10,000 farmers across southern part of India. By promoting financial inclusion, they have empowered over 10,000 farmers in more than 100 villages. Through digital initiatives, MilkLane facilitates direct payments to farmers' bank accounts, reducing intermediaries and ensuring timely remuneration. "MilkLane's recent achievement of collecting 150 kilolitres of milk per day is possible because of our farmer community. They are relentless in ensuring consistent quality and optimal cattle health," adds Sharma.

Role of Cattle Feed in High-Quality Milk Production

The secret to maintaining the quality of milk is in optimal animal health. Indian dairy farmers now recognise that cattle feed used for milch cows can make a considerable difference in milk yield and quality. "To address the market gap of high-quality cattle feed, we developed our own protein-rich and mineral-enhanced high quality cattle feed that can nourish the cows and keep them disease-free in the long run," Sharma explains. The cattle feed brand, Aayush, was launched in 2019 and has become increasingly popular among the farmer community. After hearing feedback from the farmers, MilkLane team has made alterations to the feed formula, to make the grain content high, add toxin binders and ingredients to improve fat percentage in milk.

A Modern Dairy for a Changing India

MilkLane's journey exemplifies the fusion of tradition and technology. As India's dairy landscape evolves, MilkLane stands at the forefront, ensuring safe milk, empowered farmers, and a brighter future for the entire ecosystem. With each glass of MilkLane milk, consumers not only nourish themselves but also contribute to a more inclusive and resilient dairy industry.

About Innoterra

Innoterra is a Swiss-Indian food and technology platform company transforming the economics of smallholder agriculture and ensuring the supply of healthy food to the world. The company provides high-tech and human-touch services to significantly increase the net income of its farming partners and drive the transition towards more regenerative farming practices.

Its open-architecture platform, gives farmers optimal access to input and output marketplaces and systematically enhances their farming and commercial capabilities through advisory and customized learning programs. Innoterra also provides a range of leading-edge software solutions for farm produce aggregators, farmer organizations, distributors, and retailers.

The company works closely with leading farmer communities and partners. It orchestrates the sale of quality assured traceable farm produce through its widespread sales and distribution network in India, Middle East, China and South-East Asia.
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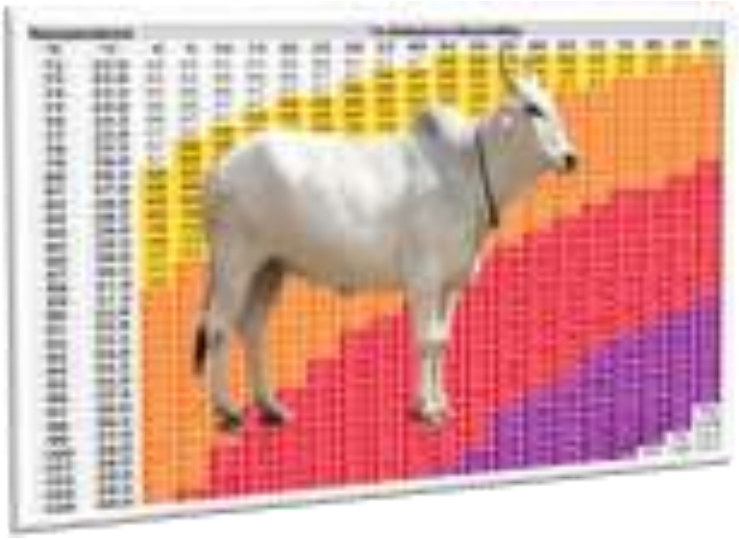
THE IMPACT OF RISING TEMPERATURE ON INDIAN DAIRY

May 6, 2024
https://dairynews7x7.com/the-impact-of-rising-temperature-on-indian-dairy/

Summers in India are getting hotter and 2024 will be no different. The Indian Meteorological Department's (IMD) forecast for 2024 indicates that India will face a harsh summer with longer than usual heat waves. Last year was the 2nd hottest year for India (2016 being the hottest) in the last 122 years, exposing humans, animals and plant life to increasing heat stress.

Experts opine that the trend of rising temperatures, with more frequent, intense, and prolonged heatwaves will exacerbate in future, as the temperature could rise ±1.2° to ±3.5° C by the end of 2050.



Rising temperature and cycle of prolonged heat waves are already triggering water scarcity, increasing instances of pest and disease attacks, lowering farm productivity, and consequently, leading to food price inflation. While impacts of climate crisis on agriculture are well studied and reported, the impacts of the crisis on India's livestock sector remain under-researched.Heat stress in cattle and buffaloes caused by increasing temperature and humidity impacts their health, wellbeing, and production capacity. We are mid-way through the summer and dairy companies are reporting a decrease in the milk supply.

A report in Lancet forecasts that the rising temperature in India threatens to reduce milk production by 25% by 2085. India being the largest milk producer and consumer of the world, these production losses will put the livelihoods and nutrition of millions at risk, especially to the 89 million small holder dairy farmers that contributes 85% of the total milk production.

Dairy experts use a scientific method – Temperature Humidity Index (THI) to evaluate the impact of heat stress on cattle and buffaloes. This index measures the thermal comfort of the animal. An index value up to 72 is optimal for milk production, and for each THI value increase beyond 72, the milk production level in cattle starts declining by 200 grams per day.

A study conducted in the northern plains of India (region that accounts for 30% of India's milk production), THI level crosses 80 and beyond, during summers. For more than half the year (April to October), dairy cattle suffer from heat stress. Animals find little respite since temperatures don't cool fast enough in the night either. If these conditions continue unabated, heat stress induced production losses in the northern plains are estimated to reach ~3.4 lakh tons of milk by 2030. Dairy farmers will lose approximately 15,000 crores as their cattle produce less milk and will suffer with heat induced heath issues.

Recognising the challenge of heat stress induced production losses, the Government of India launched programs in 2017 to identify traits for heat tolerance and develop climate resilient dairy practices. The National Bureau of Animal Genetic Record (NBAGR) has identified 3 major heat tolerance traits in cattle—heat shock proteins, coat colour and woolly hair.

Research has shown, indigenous cattle, and among them Sahiwal breed, have better heat tolerance capacity than the exotic cattle. However, these resilient traits are not always prioritised in animal breeding programs. In a market of close margins, farmers prefer raising animals that can produce more milk over animals that are sturdier but produce less milk. To help balance the trade-offs between producing more milk and ensuring a healthier dairy herd, animal breeding programs need to equally integrate performance traits like milk production as well as for heat tolerance traits, so that farmers can raise productive and healthy cattle.

Union Government through Krishi Vigyan Kendra (KVK) has set up demonstration plots in 121 climate vulnerable districts to showcase climate resilient management practices like custom designed shelters, feed supplementation with chromium propionate and trace mineral supplements significantly improves the ability to withstand heat stress. Upscaling these practices for smallholder dairy farmers remains a challenge given their low awareness level, lack of financial resources and absence of a pan-India climate-smart dairy development plan. To spur the adoption of climate smart practices among small holder dairy farmers, there is a need to develop a holistic approach at the national level with better advisory services, financial incentives, and parametric-based insurance packages.

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CASE STUDY- DYNAMIC TRACEABILITY STORY OF MOOMARK "MARCH, 2024"

About mooMark Private Limited

mooMark is a milk procurement company headquartered in Bengaluru, Karnataka. The company was established in 2020 with a distinct focus on leveraging advanced technology throughout the dairy supply chain to ensure traceability. It also employs rigorous quality tests at every stage of the milk supply chain, ensuring the freshness and traceability of every drop of milk. Initially concentrating on B2B milk procurement, the company expanded its scope in 2023 to include the creation of value-added products. The company's core mission is to support farmers, dairy, and FMCG brands by providing them with private labeling & contract manufacturing as a service.

Context

The dairy sector still remains largely unorganized. About 80% of milk sold in India goes through unorganized channels (Sharma, H et al., 2021). As a result, every individual involved in the dairy supply chain, from the farmer to the end consumer, faces various challenges. The end consumer is worried about hygiene, sourcing, contamination, and other similar issues. Meanwhile, business owners are concerned about regulatory compliance and making the supply chain more robust and efficient. The farmer expects to produce better quality milk and be compensated with a fair remuneration. To address these challenges, mooMark attempts to establish dairy traceability by integrating various applications developed for the dairy industry

Hofstede (2005) defines traceability as the transparency of a supply chain. It refers to the extent to which all stakeholders have access to the product-related information they need, without any loss, delay, noise, or distortion, right from primary producers to end users. In the food industry, traceability is widely viewed as a must for ensuring food safety and quality.

Challenges in the Milk Supply Chain

mooMark encountered operational hurdles that hindered its digitization efforts at each stage of the milk supply chain. The challenges faced are listed below:

Farm

According to the National Dairy Development Board (NDDB), India has the highest cattle population in the world, but most of the milk production comes from smallholder farmers who own a few animals (Poopathi, S., and Abidha, S. 2012). Farm records are important for making key decisions. However, animal records, such as health, pedigree, reproduction, nutrition, milk yield, and quality, are not maintained properly by the farmers due to small-scale production and less literacy in record keeping.

Further, as the majority of the cows are not registered, it is quite challenging to trace the milk back to its source. This lack of registration affects the quality and safety of the milk, as there is no way to determine the health and living conditions of the cows or to ensure that proper protocols are being followed in milk production.

Collection center

Many collection centers still rely on manual record-keeping and outdated technology systems (Fig. 1). This can result in inefficiencies and errors (Deshmukh, M. A. et al, 2015). Adopting modern technology solutions such as digital milk collection devices and data analytics platforms can streamline operations and improve productivity.

Accurate measurement of the quantity of milk delivered by farmers is crucial for ensuring fair payment and transparency in the milk collection process. However, traditional manual measurement methods are prone to errors and inconsistencies, which can result in disputes between farmers and collection center operators. Therefore, there is a need for more reliable and accurate measurement techniques to ensure a smooth and fair milk collection process.

Fig. 1: Milk collection in a village in Kolar

Chilling center

Milk is a highly perishable commodity. To maintain its freshness, it has to be chilled to under four degrees Celsius within 3–4 hours of milking. Chilling the milk is a resource-consuming activity. A lot of electricity and human resources are employed. Further, these chillers should be constantly cleaned to avoid contamination. Due to the high resources involved, the chances of pilferage are also high. So it becomes very important for business owners to track the activities of the chilling centre in real time.

Transportation

Once the milk is chilled, it has to be transported to the plant for processing. Considering the perishable nature of the milk, it must be safely transported in tankers. However, transporting the milk poses many problems, such as tracking the route and volume of milk.

Processing

The complexity of the operation and capturing real-time data at the processing units are the major challenges with respect to implementing traceability. The diverse processing steps and handling methods within a plant can pose challenges to capturing accurate and comprehensive data. Further, processing large volumes of real-time data from various sources requires robust infrastructure and efficient data management systems.

Proposed Solutions

In response to these challenges, mooMark has established dairy traceability by integrating various applications tailored to the dairy industry.

mooMark's Interventions

mooMark has deployed technologies at every point of the dairy supply chain, as shown in Table 1. These applications have gained significant popularity and have been widely accepted by stakeholders in the dairy industry.

Table 1: Technologies deployed by mooMark

#	Technology/ Application	Stakeholder	Purpose
1	mooON	Farmers and Extension/ Intervention Agents	Herd management
2	ActiTrak	Farmer	Cattle activity monitoring
3	smartFarms	Farmer	Digital milk passbooks, financial services, and agricultural input services
4	smartAMCU mobile application	Collection Center	Automatic milk collection
5	smartCC	Chilling Center	Quality checks
6	ConTrak	Chilling	Monitoring milk chilling
7	AMCU Portal	Dairy	Tracks quality, quantity, and tanker movement.
8	Traceability Portal	Processing Plant	Mapping the milk procurement and batch processing data
9	Know Your Milk (KYC)	Customer	Trace the milk journey

1. **mooON and ActiTrak**

mooON is a herd management system for monitoring & managing cattle & farm details to facilitate data-driven decision-making & driving measures to improve productivity and breeding efficiency. It offers solutions for farmers and field agents in the following ways:

Farmers and Cattle Onboarding: Dairy farmers register on the mooMark network through the mooON app, where they receive a unique digital identity. Using the app, farmers can update essential information such as farm locations, cow breeds, medication usage, and feed details.

Field Agents: To address operational challenges like farmers not owning smartphones or lacking digital literacy, mooMark has deployed field agents. These agents are responsible for keeping records of farmers and cattle updated through the mooON mobile app, ensuring seamless data management (Fig. 2).

Fig. 2: Reproduction (L) and Nutrition (R) dashboards in the mooON app

Scientific Solutions for Ration Balancing and Nutrition Management: mooON provides scientific solutions aimed at enhancing cow milk quality and productivity. These solutions cover various aspects, including feed and supplements, breeding progeny, genetics (A2), genomics, vaccination, deworming status, as well as yield and milk quality.

Cow Health Monitoring with the ActiTrak Device: The ActiTrak device is worn on the animal's leg, as shown in Fig. 3 to monitor its health. Apart from detecting heat cycles, this device identifies early signs of illness and sends alerts to farmers and veterinarians for timely intervention. Real-time data from the device is transmitted to the mooON app through a gateway installed at the farms, ensuring seamless connectivity via a 4G SIM without the need for a LAN connection.

Fig. 3: ActiTrak device (L), ActiTrak device tied to the cow's leg (R)

2. SmartAMCU

mooMark employs IoT-based automatic milk collection units (AMCUs) at its collection centers (Fig. 4 & 5), revolutionizing the milk collection process with minimal human intervention. Its operations include the following:

Weight Measurement: An empty can equipped with a unique identifier is placed on the IoT weighing scale. When farmers arrive at the mooMark collection center to pour milk, they fill these cans with their milk. The AMCUs accurately record the milk collection process, ensuring precise measurement and data entry.

Quality Assessment: A sample of the milk is analyzed using a sophisticated IoT milk analyzer. This analyzer automatically evaluates the quality parameters of the milk, providing real-time insights into its composition and characteristics.

Fig. 4: smartAMCU setup at a collection center

Data Storage and Management: All data collected during the milk collection process is automatically stored in the cloud, ensuring secure and accessible storage. This digital infrastructure of mooMark significantly reduces pilferage activities, enhancing transparency and trust in the milk supply chain.

Price Determination: mooMark defines prices for different combinations of fat and SNF (Solid-Not-Fat) content through its portal (Fig. 6). Each time a farmer delivers milk, they receive fair compensation based on the quality and quantity of milk they supply.

The pouring records are automatically updated in the digital passbook within the smartFarms app, providing farmers with transparent and accurate records of their transactions. This passbook tracks their attendance, purchases, income, and expenses, empowering farmers with comprehensive financial management tools.

Fig. 5: smartAMCU data capture flow

Fig. 6: Sample rate chart in the smartAMCU portal

3. smartCC and ConTrak

Interventions at the chilling center involve a series of crucial steps to ensure the quality and integrity of the milk supply, as follows:

Quality Testing: Upon arrival at the chilling center, milk collected from farmers in cans undergoes rigorous quality testing. A sample of milk is extracted from each can where stringent quality tests are conducted, including the MBRT (Methylene Blue Reduction Test). The results of these tests are meticulously recorded in the smartCC (Smart Chilling Center) system by mooMark, ensuring traceability and accountability in the milk supply chain.

Chilling Unit Setup: Once the milk meets the required quality standards, it is transferred to bulk milk chilling units for storage. As shown in Fig. 7, mooMark employs state-of-the-art technology, including the smartCC and ConTrak systems, to optimize chilling center operations.

Fig. 7: Bulk milk coolers (L); ConTrak hardware (R)

smartCC Monitoring: The smartCC system is specifically designed to monitor and track the quality of milk stored in chilling centers or bulk milk coolers (BMC). It provides real-time insights into various parameters, allowing for prompt action in case of deviations from the desired quality standards.

ConTrak System: Complementing the smartCC, the ConTrak system is equipped with a range of sensors to monitor key aspects such as volume, diesel generator performance, grid connectivity, temperature, milk pump efficiency, agitator operation, and compressor functionality (Fig. 8). These sensors enable continuous monitoring of power consumption, volume levels, and temperature conditions within the chilling center and tanker trucks, ensuring optimal storage conditions and preventing spoilage.

Fig. 8: ConTrak data capture flow

By implementing these interventions, mooMark ensures that milk undergoes thorough quality checks and is stored under optimal conditions, thereby preserving its freshness and nutritional value throughout the supply chain.

AMCU Portal

Interventions during transportation play a crucial role in maintaining the quality and integrity of milk as it moves from chilling centers to processing plants:

Quality Checks: Before transportation, the chilled milk undergoes thorough quality checks to ensure safety and compliance with quality standards. These checks help identify any deviations or abnormalities that may compromise the quality of the milk during transit.

Vehicle Monitoring: The movement of milk tankers is closely monitored throughout the transportation process. The AMCU portal records the real-time location and movement of vehicles carrying milk. This allows for precise tracking of the transporter, tanker, and route details, providing valuable insights into the logistics of milk transportation.

Data Recording: As depicted in Fig. 9, detailed records are maintained regarding each tanker's journey, including the quantity of milk loaded, the originating chilling center, and the route taken. This information is recorded and stored systematically, enabling traceability and accountability at every stage of the transportation process.

Fig. 9: AMCU Portal Dashboard

By implementing these interventions, mooMark ensures that milk is transported safely and efficiently from chilling centers to processing plants, minimizing the risk of contamination or spoilage during transit.

Traceability Portal and Know Your Milk (KYM)

Intervention at the dairy involves several critical steps to ensure the quality and traceability of milk:

Quality Inspection: Upon arrival at the processing plant, the quality of the milk is rigorously inspected to verify its freshness and compliance with safety standards. Any deviations or anomalies detected during the inspection are promptly addressed to maintain product quality.

Processing and Packaging: The milk undergoes processing and is packaged for distribution to consumers. Each package is labeled with a traceability QR code, which serves as a unique identifier for the batch.

Traceability Documentation: Detailed reports of each batch's production process are recorded in the traceability portal. mooMark utilizes its traceability portal to correlate milk procurement data with batch information, ensuring complete transparency and accountability.

Customer Access: Customers can access the milk's journey through the Know Your Milk (KYM) portal by scanning the QR code on the product packaging (Fig. 10). This portal provides comprehensive information about the milk's origin, production process, and journey from farm to table, empowering consumers with transparency and trust.

Fig. 10: Know Your Milk (KYC) consumer portal

By implementing these interventions, mooMark ensures that each batch of milk meets the highest standards of quality and traceability, fostering consumer confidence and satisfaction.

Conclusions

mooMark operated in just 204 villages in 2020. In the same year, the company onboarded a modest 3,268 farmers and 10,748 cattle. However, mooMark has achieved remarkable growth within four years by expanding its reach to engage with 65,000 farmers. This represents a twenty-fold increase in the number of farmers onboarded since its inception. Presently, the company oversees a network of 104,000 registered cattle, facilitating the production and distribution of 100,000+ liters of milk daily, a substantial leap from the initial 16,000 liters.

Despite encountering numerous operational challenges inherent in digitizing the dairy supply chain, mooMark has successfully implemented its innovative solutions across 800 centers, setting a new standard for transparency, efficiency, and quality assurance in milk production and distribution.

By leveraging advanced technologies such as IoT, sensors, and cloud computing, mooMark has not only addressed the pressing concerns of consumers regarding milk quality and safety but has also empowered dairy farmers with tools for better herd management, fair compensation, and financial transparency. Additionally, mooMark's initiatives have enhanced the operational efficiency of collection and chilling centers, transportation logistics, and processing units, leading to improved productivity and reduced waste.

mooMark's journey exemplifies how technology-driven solutions can address longstanding challenges, create value for stakeholders at every level, and pave the way for a more sustainable and resilient dairy industry in the digital age. As mooMark continues to expand its footprint and impact, the future of dairy traceability looks brighter than ever before.

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NESTLE INDIA CMD DISMISSES NGO ACCUSATIONS ON BABY FOOD

May 6, 2024

https://dairynews7x7.com/nestle-india-cmd-dismisses-ngo-accusations-on-baby-food/

Recently, Nestle India CMD Suresh Narayanan was in the hot seat as he fielded questions on the sugar controversy triggered by a recent report released by Swiss investigative organisation Public Eye. Narayanan vehemently dismissed accusations made by the Swiss NGO about Nestle having "double standards" for developed and developing markets. The report alleged that Nestle's baby food products sold in low and middle-income countries including India contain "high levels of added sugar", while such products are sugar-free in developed markets.

The report's claims about the increased sugar levels in Cerelac sold in India has prompted the Food Safety and Standards Authority of India (FSSAI) to kickstart an industry-wide testing of infant food products across brands.

Nestle is no stranger to controversies. The Swiss multinational, which is the largest publicly held food company in the world, has battled critics over its marketing practices, labour handling and product safety over the years. Its baby food and infant formula — in which it is the leading player, with a fifth of the world's market share — has repeatedly come under the scanner of multiple agencies worldwide. The question is, will this current crisis impact sales?

Quick Reaction

The India chief has lost no time in defusing the crisis. Asserting that the company applies the same nutrition principles globally, Narayanan said there is no local approach to making "nutritional adequacy" strategy. He pointed out how this global approach translates into products locally depends on raw materials, feeding habits and local regulatory norms. "I also want to add very clearly that added sugar products and no-added sugar products are present in Europe as well as in Asia. So these allegations of racial stereotypes are unfortunate but untrue. There is no distinction made between a child in Europe or a child in India or any other part of the world," he said at a media roundtable. The company has also said that added sugar levels in Cerelac portfolio is at 7.1 gram per 100 grams of feed, which is "well below" the prescribed limit set by FSSAI (13.6 grams per 100 gm). "In the last five years, we have achieved almost a 30 per cent reduction in added sugar in the infant cereal portfolio. We are looking at further ways of reducing "added sugar" and it's an ongoing process," Narayanan said.

The controversy comes at a time when consumer activism about healthier food products and claims are gaining ground amidst growing calls for more stringent regulations and enforcement.

Experts say that it's now for the FSSAI to complete testing to verify the declarations made by the company. They also added that this sugar controversy is unlikely to have long-term ramifications for the company.

Ankur Bisen, Senior Partner and Head-Consumer, Food and Retail, Technopak, says, "It's

not as if this has come as a shock to Nestle. The sugar controversy is not specific to India.

There has been a lot of activism around sugar globally which packaged food companies have been facing for the past few years. It is Nestle's stated goal that it is working on reducing sugar levels and focusing on adding healthier products to their portfolio. In that context, Nestle has systems and an apparatus in place to address this issue."

On the other hand, Bisen believes the sugar controversy puts the spotlight on the incapacity of India's food regulatory framework to deal with such issues more proactively and the need to put in place more stringent norms.

Give consumers choice

But could Nestle have done better? KS Narayanan, food and beverage expert and former MD, McCain Foods, says, "They should have offered both variants with added sugar and no-added sugar as part of their portfolio and should have left it to the consumers to make their choice. Maybe they will do that in the future or may come out with another formulation as a fallout of this controversy."

"Nestle India dominates the infant food segment. The alternative is home recipes, but the reason consumers seek baby food products is for convenience and brand trust. Also, this category cannot be advertised as per law. In a category that can be advertised, it's far easier for new brands to emerge with a differentiated proposition," he adds.

The company said that it has not seen any significant impact on sales of the Cerelac portfolio.

Nestle India had faced a far more daunting challenge in 2015 with the Maggi crisis. Cut to 2024, India has emerged as the largest market worldwide for brand Maggi.

India is after all a priority market for the Swiss packaged food major where it is executing an accelerated investment plan. Irrespective of the recent controversy, the company seems to be going full steam ahead with new bets, announced just last week, with a strong focus on tapping into the growing demand for premium products.

Nestle India is set to launch Nespresso's premium range of coffees and machines by the end of this year. It will also be launching Nespresso boutiques with the first one slated to open in New Delhi. "The maturity of Indian consumers to appreciate premium coffee products has grown significantly in recent times. So the market is now ready for a product like Nespresso," said Bisen.

At the same time, Nestle has inked a definitive agreement to set up a joint-venture with Dr. Reddy's Laboratories by Q2FY25 to scale up its health science nutraceuticals business

Lessons from Maggi

Narayanan, who is credited for pulling Nestle out of the Maggi crisis, stressed at a media rountable lastweek, "The rhetoric around the allegations need to be scientific and mature instead of hyperventilation of emotions."

Clearly, the company is leveraging on the learnings from the Maggi crisis. This time round it has been upfront right from the start in engaging with all stakeholders on the issue. "I am talking to you today as a professional would. I am not trying to stay quiet on this and hope and pray nobody talks about the issue. As a leader I am paid to stand up in front. I took the bullets then and I am taking the bullets today. As a leader that's my job," Narayanan said at the roundtable.

DAIRY FARMERS FACE UNPRECEDENTED CRISIS IN KERALA DUE TO HEAT

May 6, 2024

https://dairynews7x7.com/dairy-farmers-face-unprecedented-crisis-in-kerala-due-to-heat/

Livestock farmers in the State are facing an unprecedented crisis as intense heat and humidity are having a deadly effect on farm animals. While dairy cow mortality has hit an all-time high with thermal stress killing around 500 cattle across the State in two-and-a-halfmonths, poultry producers are also in distress.

Farmers say the cows, mostly crossbreeds, just started collapsing and deaths are rather unusual.

As temperature and humidity continues to soar, two worst-hit districts are Kollam and Palakkad that reported105 and 67 cattle deaths respectively. “I have been rearing cows for over 30 years, but I am seeing heatstroke deaths for the first time,” says Nizam, a dairy farmer from Kollam. His cow had delivered a calf on April 6 and last week it started to slobber while the breathing became very laboured. Though Mr. Nizam kept the cow hydrated and used to pour water on its body three to four times a day, it soon collapsed and died. An autopsy conducted by the Animal Husbandry department confirmed that the animal died due to extreme thermal stress. “The cow had cost me ₹75,000 and it was producing around 20 litres of milk a day. I have 14 more cows and I can see them struggling to tolerate thermal stress,” he adds.

While methods like installing fans and sprinkling water on the animals are not working for many, the situation is more critical in some parts. As record-breaking heat sweeps across the State, many parts are facing acute water and fodder shortage. Though the department has issued guidelines to protect the animals from scalding heat, some people are unable to afford it. While an adult cow requires around 50 litres of water a day, farmers in some areas cannot provide even half the quantity. “Many panchayts in Kerala are currently reeling under severe water scarcity. When they don’t have access to enough drinking water, feeding the cattle is never a priority. In such conditions, the animals get less than 15 litres a day leading to dehydration,” says a senior official with the Animal Husbandry department.

Scarcity of green fodder

Green fodder becoming scarce is another challenge as most farms cultivating fodder grass have recorded a 60 to 70% dip in production. “Cattle usually get a considerable percentage of water from green fodder and when they don’t get needed amount of both, their immunity declines making them susceptible to a range of diseases. When a secondary infection occurs to dehydrated animals, they will not survive,” he adds.

Poultry farmers say the situation is alarming as broilers are highly vulnerable to thermal stress. “Their productivity and weight gain are usually affected during summer months. But this time they are easily succumbing to the heat. Transportation is also an issue as half the chicken in a consignment from Tamil Nadu arrived dead at our farm in Ernakulam,” says Kumari, poultry farmer.

ACTIVISTS CALL OUT FSSAI FOR INCREASING PERMISSIBLE LEVEL OF PESTICIDES IN INDIAN HERBS, SPICES

May 5, 2024
https://dairynews7x7.com/activists-call-out-fssai-for-increasing-permissible-level-of-pesticides-in-indian-herbs-spices/

Much to the outrage of activists and scientists, the Food Safety Standards Authority of India (FSSAI) increased the maximum residue limit (MRL) of pesticides in herbs and spices by a whopping 10 times.

The order dated April 8, 2024, revealed that the MRL of pesticides has increased substantially from 0.01 milligrammes per kilogramme (mg / kg) to 0.1 mg / kg. The Food and Agriculture Organization (FAO) defined MRL as the highest legally tolerable level of pesticide in food or animal feed.

Amit Khurana, programme director of sustainable food systems at the Centre for Science and Environment, New Delhi, told Down to Earth (DTE), if the FSSAI is relaxing the limit, then ultimately it allows for more pesticides to be ingested into the human body with severe health implications. “If you are making such a huge upward revision, then you have to substantiate it by releasing the data based on which the decision was made,” he said, adding:

Data for changing values, if increased, should have been provided.

The MRLs of pesticides for food and commodities, including spices and culinary herbs, are specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulation, 2011. These MRLs are fixed based on the field trial data received through the Central Insecticides Board and Registration Committee (CIBRC), Union Ministry of Agriculture and Family Welfare, the FSSAI stated in its order. There is no declared procedure of using this data to fix MRLs, said Narasimha Reddy Donthi, an independent researcher and environmental justice activist.

A letter penned by the Pesticide Action Network of India objected to this mandate, saying that CIBRC does not conduct field trials of pesticides. The manufacturing companies generally provide the data, which is reviewed by CIBRC to approve pesticides. The CIBRC never sets any limits on residues, the letter implied. Its approval does not refer to residues at all, it highlighted.

However, for certain pesticides without field trial data available, the MRL was arrived at based on data generated by the Centre’s Monitoring of Pesticide Residues at National Level (MPRNL) scheme, the order explained. But MPRNL does not have data on all pesticides and neither does it include spices in monitoring, Donthi said.

FSSAI, in a previous order dated April 21, 2022, had categorically mentioned most of India’s pesticides lack field trial data. Till such time that they can generate this data, MRIs specified by Codex Alimentarius, a collection of internationally adopted food standards, are to be applied. It was established by FAO and the

World Health Organization in 1963. In the absence of Codex, regulating authorities in the country of export will specify the MRLs.

Further, the latest order clarified that for food commodities besides spices and culinary herbs, MRL is applicable under Codex. For the European Union, the default lowest limit in case MRL is not specified for pesticide / commodity is 0.01 mg / kg.

Moreover, the order also said that if the pesticide is not registered with CIBRC, then the MRL of 0.1 mg / kg will be applicable for the spices and herbs, which activists DTE spoke with strongly opposed.

The aforementioned letter authored by the chief executive of the network AD Dileep Kumar and Donthi, posed a question: Why pesticides not registered with CIBRC are being given MRLs at all? Khurana concurred. “What is not registered should not be used.”

The letter indicated that the amount of pesticides found in food commodities has been increasing over the years, adding that information is scarce.

“Project reports or information on residues detected in commodities as part of MPRNL have not been made available in the public domain since 2018-19, hence the level of contamination is not available to consumers and primary stakeholders. However, information gathered through the provisions of the Right to Information Act, 2005, from the All India Network Project on Pesticide Residues for the last five years indicated that the percentage of samples detected with the presence of residues has increased from 22.6 per cent in 2018-19 to 35.9 per cent in 2022-23,” the letter explained.

Moving forward, speaking to DTE, Donthi recommended that the FSSAI should set zero MRLs for pesticides that are not approved and 0.01 mg / kg for pesticides that are approved for usage by CIBRC.

“There are hundreds of pesticides in India, under several categories such as insecticides and biopesticides and umpteen food items. The order does not make any specific reference and appears ambiguous,” Donthi said. He added that the FSSAI must be more transparent and declare all the culinary herbs and spices it is referring to.

The feasibility and implications of this order need to be studied in detail considering import and export, said Kumar. “The one point that we mentioned in our response is that if India is diluting the MRS standards, our export market will reject the products from India. At the same time, importers will gain.”

Several foreign governments have imposed trade restrictions on Indian food that are high in pesticide residue. Recently, the Singapore government recalled Indian spice maker Everest’s fish curry masala after the carcinogenic pesticide ethylene oxide was detected. Before that, Hong Kong’s food regulatory body also raised its concerns about the same group 1 carcinogen found in India’s MDH Pvt Ltd food products.

GODREJ JERSEY TO EXPAND ITS RETAIL PRESENCE AND PARLOURS ACROSS INDIA

May 4, 2024

https://dairynews7x7.com/godrej-jersey-to-expand-its-retail-presence-and-parlours-across-india/

Godrej Jersey, an Indian dairy company, is trying to make a move into the untapped potential of the milk market by addressing the competitive dynamics of the sector. Lucrative opportunities exist in areas such as value-added dairy products, organic/ farm fresh milk and exports. The market growth in Dairy requires support of significant infrastructure investment across processing, chilling, logistics, cattle feed etc.

"Today, we are witnessing a shift in consumers' preference towards convenient and affordable value-added dairy products. Hence,we have been actively introducing new products and variants to cater to this evolving consumer preferences," said Bhupendra Suri, CEO, Godrej Jersey.

India is the highest milk producer and ranks first position in the world; the milk production of India has registered 58 per cent increase during the last nine years i.e., during the year 2014-15 and 2022-23. It increased to 230.58 million tonnes in the year 2022-23 and production is up at a CAGR 5.85 per cent over the past nine years, according to Invest India.

India's per capita milk consumption is estimated to increase by 2.12 per cent during 2023-2024. Uttar Pradesh, Rajasthan, Gujarat, Maharashtra, and Bihar are the major states for the country's dairy consumption. Godrej Jersey has expanded its market presence into regions like Western Uttar Pradesh, Maharashtra and Uttarakhand, where it has observed a substantial demand for south-made ghee in Northern markets. "This strategic move aligns with our ambitious plans for market expansion, focusing on both Southern and gradually Northern India. We aim to solidify our position and capitalize on the increasing demand for dairy products in these regions," the CEO added.

In order to increase its penetration across India, the company last year launched Milky Shots at INR 10.Similarly, Recharge, a rejuvenating drink infused with whey protein continues to receive positive response from the consumers. "In the coming year, we intend to launch low-sugar variants of our products. In sync with our commitment to innovate and meet diverse consumer demands, we will continue to expand our portfolio of value-added dairy products across price points and sizes thereby providing diverse choices to our customers.," the CEO explained.

Currently, the dairy industry's revenue composition leans towards core milk products, constituting around 68 per cent of the market share, while value-added products (VAPs) represent approximately 32 per cent. However, there is a notable trend of growth in VAPs, outpacing the

overall milk business with a 20 per cent annual growth rate. “For us, the contribution of VAP to our topline improved to 36 per cent at the end of the quarter ended December 2023 from 32 per cent, a year ago.”

The company has elaborate expansion plans for the near future and increasing its retail presence is a key goal, “Our goal is to become a prominent retail brand by offering products catering various sizes and varieties thus enhancing demand and accessibility. Smaller denomination products like Milky Shots and Badam Milkto broaden our penetration in the retail market.”

Besides the company is focusing on increasing its New Jersey Parlours across different regions, “These parlors will offer a wide range of SKUs, including milk variants, value-added dairy products and other dairy-based beverages.”

The India Dairy market size is estimated at $26.11 billion in 2024, and is expected to reach $35.96 billion by 2029, growing at a CAGR of 6.61 per cent during the forecast period (2024-2029), said a report by Mordor Intelligence, a market research company.

DAIRY FARMERS IN KERALA WELCOME HEAT INDEX-BASED INSURANCE COVER FOR ANIMALS

May 4, 2024
https://dairynews7x7.com/dairy-farmers-in-kerala-welcome-heat-index-based-insurance-cover-for-animals/

Dairy farmers have responded keenly to the heat index-based cattle insurance scheme rolled out by the Ernakulam Regional Cooperative Milk Producers’ Union (ERCMPU).

which fall under the regional cooperative. There are around 1,000 dairy cooperatives in the region.

The premium is ₹99 per animal. Of this, ₹50 is paid by the regional cooperative and ₹49 by

The novel scheme, introduced for April and May considering the rising temperatures, saw around 25,000 animals getting the insurance cover. Taking the average number of animals per dairy unit, around 10,000 farmers could be involved, said M.T. Jayan, chairman, ERCMPU, on Thursday.

The scheme was opened for farmers in Thrissur, Ernakulam, Kottayam and Idukki districts,

the beneficiaries. The eligible insurance cover is remitted directly to the accounts of farmers.

The rising temperatures, meanwhile, have had a clearly visible impact on the general health of animals as well as milk production. Mr. Jayan said milk procurement in the region had fallen short by around a lakh litres a day. There is an

overall shortage of 20% across the State, indicating an overall shortage of at least three lakh litres a day from the usual levels.

The average milk procurement in the Ernakulam region used to be around 3.25 lakh litres a day. At the same time, milk sales now hover around 4 lakh litres. The shortfall in local milk supply is met through import from Maharashtra and Karnataka.

Mr. Jayan said dairy farmers were not in a position to collect fodder or to let out animals for forage as the heat level is high. Animals are sheltered under shade trees or in cattle sheds during most part of the day to prevent heat stroke. Watering them frequently is a must during the hot months, and this has added to the tasks of the farmers who used to collect green fodder or prepare other feeds during the day time.

DELHI HC DIRECTS ACTION AGAINST USE OF OXYTOCIN IN DAIRY COLONIES

May 4, 2024
https://dairynews7x7.com/delhi-hc-directs-action-against-use-of-oxytocin-in-dairy-colonies/

The Delhi High Court has directed authorities to take action against the spurious use of oxytocin in dairy colonies here, saying the administration of the hormone amounts to animal cruelty and is an offence.

A bench headed by Acting Chief Justice Manmohan Court asked the Delhi government's department of drugs control to conduct weekly inspections and register cases which will be investigated by the police.

The court further asked the Intelligence Department of Delhi Police to identify the sources of oxytocin production, packaging and distribution and take action in accordance with law.

The court's order came on a petition by Sunayana Sibal and others concerning the state of dairies in the national capital.

The bench, also comprising Justice Manmeet PS Arora, recorded that one of the issues flagged by the court commissioner was the "rampant use" of oxytocin to force milk letdown and to increase production of milk in the cattle.

"Since administering of oxytocin amounts to animal cruelty and is a cognisable offence under Section 12 of The Prevention of Cruelty to Animals Act, 1960, consequently, this Court directs the Department of Drugs Control, GNCTD to conduct weekly inspections and ensure that

all cases of spurious oxytocin usage or possession are registered under Section 12 of The Prevention of Cruelty to Animals Act, 1960 and Section 18(a) of the Drugs and Cosmetics Act, 1940," the court said in its order passed on May 1.

"The said offences are directed to be investigated by the jurisdictional police stations. The Intelligence Department of Delhi Police is directed to identify the sources of such spurious oxytocin production, packaging and distribution and take action in accordance with law," it added.

The court also opined that the dairies should be relocated in areas having proper sewage, drainage, biogas plant, ample open space for the cattle to move around and enough grazing area.

It recorded that as per the court commissioner, the condition of all nine designated dairy colonies in Delhi — Kakrola Dairy, Goela Dairy, Nangli Shakrawati Dairy, Jharoda Dairy, Bhalaswa Dairy, Ghazipur Dairy, Shahbad Daulatpur Dairy, Madanpur Khadar Dairy and Masoodpur Dairy — was "bad".

Considering that the Ghazipur Dairy and Bhalaswa Dairy were located next to sanitary landfill sites, the court observed that there was an "urgent" need to relocate them and sought the presence of the MCD Commissioner, MCD Director of Veterinary, Delhi Chief Secretary, DUSIB CEO and FSSAI CEO to virtually join the proceedings on the next date of hearing.

"Keeping in view the apprehension that dairies next to the landfill sites can cause illness and public health hazards, this court is prima facie of the view that these dairies need to be relocated forthwith. But before issuing any binding direction, this court would like to hear from the concerned officials as to how these directions should be implemented," it stated.

The court said the officials shall explore the possibility of availability of land where the dairies could be rehabilitated and relocated, while asking the chief secretary to hold a prior meeting with the relevant officials before appearing before it on May 8.

A SCIENTIFICALLY-EVOLVED AND TRULY ACCOUNTABLE FSSAI NEED OF THE HOUR

May 3, 2024

https://dairynews7x7.com/a-scientifically-evolved-and-truly-accountable-fssai-need-of-the-hour/

Nestle accused of varying levels of sugar content in products for India and European nations

We can't let the FSSAI to get away with it. There are 26 scientific committees that FSSAI has constituted for setting standards and yet if the norms are so relaxed it becomes obvious that the 'conflict of interest' is much larger than what has often been talked about

NestleIndia Chairman and Managing Director Suresh Narayanan's denial of the accusation of a higher sugar content in baby food formulations as being "racially stereotyped is unfortunate" and untrue, has to be taken with a pinch of salt.

"There is no local of approach to making a nutritional adequacy study. Globally the recipes are engendered in an age where energy dense products are needed by growing children. So there is no distinction that is made between a child in Europe and a child in India or any other parts of the world," he was quoted as saying in the media on April 29.

He was responding to news items based on a report released by the Switzerland-based NGO Third Eye and the International Baby Food Action Network (IBFAN) accusing the company of double standards — having high sugar content in the baby food cereal (Cerelac) that is marketed in developing countries, including India, when compared with the product sold in Europe.

"That we have the need in India is the reason why we have added this, but at levels which are much lower than what is even specified by the local regulator and I think one has to have the trust and confidence that the local regulator knows what we are putting there. So it is not a dramatic deviation that has been done."

He further adds that the formulations get translated into a product locally on the basis of "different considerations on local regulatory requirements on local availability of raw materials on some of the maternal feeding habits."

If all that has been said by way of the denial statement was true, I don't see any reason why the Ministry of Consumer Affairs should has directed the regulatory agency – the Food Safety and Standards Authority of India (FSSAI) — to take "appropriate action" against Nestle.

Following the directive, the FSSAI has already initiated an investigation into the controversy regarding the composition of Nestle baby food product. And let me add here, despite the seemingly tough directive for probe into the allegations I am not sure how far will the promised investigations reach to its logical conclusions.

If the FSSAI had worked with an iron fist in first setting up tougher standards, and then following it up with tougher implementation, no food giant would have taken the Indian market so casually. The denial statement from Nestle itself bares the visible fault lines when it says (and I repeat): "That we have the need in India is the reason we have added this, but at levels which are much lower than what is even specified by the local regulator." If you look at this

statement carefully, the question that immediately crops up is where is the need in India that prompted the company to go in for higher sugar content in baby food? Who has asked the baby food companies to add more sugar for the products sold in India?

I haven't seen any study or report from nutrition bodies in India that seek more sugar in baby foods as energy diffuser.

At the same time, Nestle says that it has added only 7.1 grams of sugar per 100 grams of feed, and that too against the permissible limit of 13.6 grams that the FSSAI has prescribed, opens up another worm of cans. It only shows how lax have been the FSSAI standards, allowing even an elephant to pass through. FSSAI should be asked to release the data based on which it set the permissible limit of sugar in baby foods. We can't let the FSSAI to get away with it. There are 26 scientific committees that FSSAI has constituted for setting standards and yet if the norms are so relaxed it becomes obvious that the 'conflict of interest' is much larger than what has often been talked about.

As senior science commentator Dinesh C. Sharma, says: "For years, consumer groups and public health experts have been demanding a distinct health label for food products high in salt, sugar and fats, but the food safety authority and the industry have constantly opposed this. On the other hand, the regulator is quick to meet industry demands and even endorse their products, which is not its mandate"

It only shows how corporations influence public policy.

Now let's move to pesticides. Amidst the heat generated over certain Indian spice brands violating the quality standards thereby inviting import bans, it has now become clear that the FSSAI (through an order issued on April 8, 2024) itself raised the permissible residue limit (MRL) of pesticides in spices and herbs by 10 times. Against the permissible limit of 0.01 mg per kg, the limit has now been raised to 0.1 mg/kg. This comes at a time when (based on RTI) it has been found that in the past five years, the presence of pesticide residues has increased from 22.6 per cent to 35.9 per cent in the tested samples.

Under the given conditions, and knowing that tighter pesticides regulations in Europe and America have led to Indian export consignments being increasingly rejected on quality parameters, the relaxation of MRL norms by FSSAI clearly comes as a surprise.

Coming back to sugar, while it is important to be mindful of your sugar intake, much of it remains hidden in processed foods. Even an enlightened consumer will find it difficult to identify the added sugars. Since several studies have shown that there are at least 56 different names for sugar that normally are used to deceive consumers, but at least the FSSAI should be able to read these and drastically restrict its usage knowing the harm it causes.

I am not only talking of diabetes that too much sugar consumption can lead to, but as a study published in the Journal of Dermatology has shown that besides genetic characters, even sugar-sweetened beverages can lead to hair loss in men.

Where does it all lead to especially seeing the quantum jump in junk foods consumption over the years? If FSSAI could emerge as a tough regulator, the average consumer will become satisfied and comfortable with whatever he is buying off the supermarket shelves knowing it is safe and healthy. But it is not happening. A dominant section of the consumers knows that the processed foods that he/she is buying are not healthy but he is left with little choice. Global studies have shown that a whopping 89 per cent of the processed foods available in India (and six other major economies) are unhealthy (see my earlier column: Processed foods and beverages are silent killers, Jan. 18, 2024).

We already have a situation where childhood obesity is going to be a bigger problem than childhood hunger. On the other hand, India is

already among the top five countries in adult obesity. Reports say an estimated 135 million Indians are either obese or overweight.

I don't blame it entirely on food habits and consumption but the 'chalta hai' attitude to regulate quality of food is pushing more and more people in that trap. The urgent need is to convert FSSAI into a body that the country can have faith and confidence in. Even if it comes to overhauling the existing structure, we must do it.

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DECODING THE PRE-PACKAGED FOOD LABEL

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According to the Food Safety and Standards (Packaging and Labeling) Regulations, 2020, certain labelling requirements must be met before distributing food products.

FAQs on Designing Food Labels !

- Are there any regulations on pre-packaged food labels?
- Do I need to place the symbol ■/▲ on the front, back, or both sides of the package?
- What should be the serving size for my products?
- What parameters are mandatory for the nutritional information table?
- Are there any conditions attached to making health claims?
- Can I state "My product is 100% natural" on the food label?
- Can I make claims about the health benefits of my product?
- Can I use testimonials or endorsements on my product label?
- Can I use imagery that suggests that "My product is healthier"
- Do I need to include a disclaimer stating that "Images are for creative representation only"?

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FSSAI TO LAUNCH SURVEILLANCE ON FORTIFIED RICE, DAIRY PRODUCTS AND SPICES

May 3, 2024

https://dairynews7x7.com/fssai-to-launch-surveillance-on-fortified-rice-dairy-products-and-spices/

After starting a probe into alleged violation of norms in branded spices, food regulator FSSAI plans to launch surveillance on other food items like fortified rice, dairy products and spices sold in the domestic market.

According to sources, the Food Safety and Standards Authority of India (FSSAI) is planning surveillance on food items like fruit and vegetables, salmonella in fish products; spice and culinary herbs; fortified rice; and milk and milk products.

FSSAI is already taking samples of spices in powder form of all brands, including MDH and Everest, from across the country in view of quality concerns flagged by Singapore and Hong Kong.

"In view of the current development, FSSAI is taking samples of spices of all brands, including MDH and Everest, from the market to check whether they meet the FSSAI norms," a source had said on April 22.

FSSAI does not regulate the quality of exported spices, sources said.

Early last month, Hong Kong's Center for Food Safety (CFS) asked consumers not to buy and traders not to sell MDH's Madras Curry Powder (spice blend for Madras curry), Everest Fish Curry Masala, MDH Sambhar Masala Mixed Masala Powder, and MDH Curry Powder Mixed Masala Powder.

The CFS had said that samples of several kinds of pre-packaged spice-mix products of two Indian brands were found to contain a pesticide ethylene oxide.

Singapore Food Agency also directed a recall of such spices. After Hong Kong's directive, the Singapore Food Agency (SFA) also ordered a recall of imported 'Everest Fish Curry Masala' from India.

Last week, FSSAI said it was in the process of collecting pan-India samples of Nestle's Cerelac baby cereals, amid a global report claiming that the company was adding higher sugar content to the product.

According to sources, FSSAI carries out various pan-India surveillance on various food products to assess the compliance status of implemented regulations.

The number of samples analysed during the past few years has grown substantially from 1,07,829 in 2020-21 to more than 4,51,000 in 2023-24, registering an increase of more than 3 times.

In 2020-21, 1,07,829 samples were analysed and 28,347 samples were found non-conforming. In 2021-22, 1,44,345 samples were analysed and 32,934 were found non-conforming.

During 2022-23, 1,77,511 samples were analysed and 44,626 found non-conforming. Last fiscal, 4,51,296 samples were analysed.

There has been an increase in cases launched and convictions showing the efforts made by

the concerned food safety authorities towards enforcement of the FSS Act 2006.

FSSAI undertakes regulatory testing and monitoring/surveillance of various food products through a chain of food testing laboratories operating in both government and private sectors.

The laboratories are notified as primary and referral laboratories. Presently, 239 primary food testing laboratories, 22 referral laboratories and 12 reference laboratories are operating in the country.

As per the FSSAI Act, samples analysed as Substandard and Misbranded are penalised under Sections 50 to 54 of the FSS Act, 2006 where the maximum penalty can be levied up to Rs 5 lakhs for sub-standard food, up to Rs 3 lakhs for Misbranded food and up to Rs 10 lakhs for misleading advertisements.

In case samples are analysed as unsafe will lead to the food businesses being prosecuted under Section 59 of the FSS Act 2006, where a three-month jail term with a penalty of up to Rs 3 lakhs can be levied, where failure does not result in injury.

Whereas in case of injuries caused due to consumption of unsafe food under section 59, from 59(ii) to sec 59 (iv), there is punishment with imprisonment from one year to six years, accompanied with a fine that may range from 3 lakhs to 5 lakhs, as applicable weighing the gravity of the injury.

Further, where such failure or contravention results in death, the defaulter food business operators (FBOs) could be convicted with imprisonment for a term which shall not be less than seven years but which may extend to imprisonment for life and also with a fine, which shall not be less than Rs 10 lakh.

ROLE OF MILK AND DAIRY PRODUCTS IN ASTHMA

May 3, 2024
https://dairynews7x7.com/role-of-milk-and-dairy-products-in-asthma/

Milk and other dairy products are commonly consumed foods that provide essential nutrients such as calcium, protein, and vitamins. However, there is ongoing debate and research regarding their potential impact on asthma, a chronic Milk and other dairy products are commonly consumed foods that provide essential nutrients such as calcium, protein, and vitamins.

However, there is ongoing debate and research regarding their potential impact on asthma, a chronic respiratory condition characterized by inflammation and narrowing of the airways. While some individuals may experience worsened asthma symptoms after consuming dairy products, the relationship between milk and asthma is complex and varies among individuals.

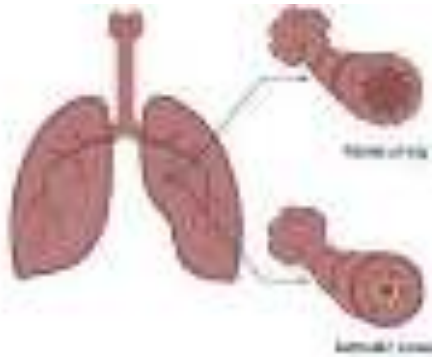
Asthma is a chronic respiratory condition characterized by inflammation and narrowing of the airways, leading to symptoms such as wheezing, shortness of breath, chest tightness, and coughing. These symptoms can vary in severity and frequency, often triggered by factors like allergens, respiratory infections, exercise, or environmental pollutants. Asthma affects people of all ages and can significantly impact daily activities and quality of life.

Role of dairy in asthma

Inflammatory response: Dairy products contain proteins such as casein and whey, which some individuals may be sensitive to. In susceptible individuals, consuming dairy products can trigger an inflammatory response in the body, potentially exacerbating asthma symptoms.

Mucus production: Some people with asthma may experience increased mucus production in the airways after consuming dairy products. This excess mucus can contribute to airway obstruction and worsen breathing difficulties in individuals with asthma.

Allergic reactions: While true dairy allergies are relatively rare in adults, some individuals with asthma may have an allergy or intolerance to dairy proteins. Allergic reactions to dairy can range from mild symptoms like hives and itching to severe reactions such as anaphylaxis, which can affect respiratory function and exacerbate asthma symptoms.Studies have shown mixed results



Studies investigating the relationship between dairy consumption and asthma have yielded mixed results. Some studies have found a positive association between dairy intake and Research suggests that dairy consumption during infancy and childhood may be associated with an increased risk of developing asthma or respiratory symptoms. However, the evidence is not conclusive, and more research is needed to understand the relationship between early dairy exposure and asthma risk.

In adults with existing asthma, the impact of dairy consumption on

Few things to consider

The impact of dairy on asthma symptoms can vary greatly among individuals. Some people may be more sensitive to dairy proteins or lactose intolerance, while others may tolerate dairy products without experiencing adverse effects on their asthma.

Individuals experiencing asthma symptoms that worsen after consuming dairy products may benefit from allergy testing to determine if they have a dairy allergy or intolerance. Identifying specific triggers can help individuals make informed dietary choices to manage their asthma effectively.

Different dairy products may have varying effects on symptoms. For example, some individuals may tolerate fermented dairy products like yogurt or kefir better than milk or cheese. Asthma symptoms may be influenced by overall dietary patterns rather than specific food items alone. A balanced diet rich in fruits, vegetables, whole grains, and lean proteins may help manage asthma symptoms and improve overall respiratory health.

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MICROBES, NOT FOSSIL FUELS, PRODUCED MOST NEW METHANE

May 2, 2024
https://dairynews7x7.com/microbes-not-fossil-fuels-produced-most-new-methane/

A modelling study has found methane emissions from fossil fuels declined between 1990 and the 2000s and have been stable since, whereas microbes have been producing more methane of late. One reason could be an increase in cattle-rearing in Latin America and more emissions from waste in South and Southeast Asia

For the last three years, Naveen Chandra has been spending most of his days running simulations at the Research Institute for Global Change in Japan. He is trying to recreate the last 50 years of the earth's atmosphere on a supercomputer roughly the size of an auditorium.

Mr. Chandra has been trying to answer a question that came out of his team's research. During 2019-2020, these researchers examined the concentration of methane in the atmosphere and how it changed with time. Until the 1990s, the concentration increased, then stabilised for a bit, and then started to increase again around 2007. According to recent estimates, the atmospheric concentration of methane today is three-times what it was 300 years ago.

Where is this methane coming from? That's what they wanted to know.

Evolving understanding

Methane is the second most abundant anthropogenic greenhouse gas after carbon dioxide (CO_2) but it warms the planet more. Over a century, methane has a global warming potential 28-times greater than CO_2, and even higher over shorter periods like two decades.

It wasn't until recently that policymakers began to focus on methane vis-a-vis addressing global warming. At the U.N. climate talks in 2021, member countries launched the 'Global Methane Pledge' to cut the gas's emissions and slow the planet's warming. Yet our understanding of methane also continues to evolve.

For instance,Mr. Chandra and his team recently reported that microbes have been the biggest sources of methane in the atmosphere, not the burning of fossil fuels.

The sources of methane

Scientists are increasingly recognising various sources of methane, most of which fit in two categories: biogenic and thermogenic. When fossil fuels such as natural gas or oil are extracted from deep within the earth's crust, thermogenic methane is released. Biogenic methane comes from microbial action.

The microbes that produce methane are archaea — single-celled microorganisms distinct from bacteria and eukaryotes — and are called methanogens. They thrive in oxygen-deficient

environments, such as the digestive tracts of animals, wetlands, rice paddies, landfills, and the sediments of lakes and oceans.

Methanogens play a crucial role in the global carbon cycle by converting organic matter into methane. While methane is a potent greenhouse gas, its production by methanogens is an essential part of natural ecosystems. But human activities like agriculture, dairy farming, and fossil fuel production have further increased methane emissions.

Both biogenic and thermogenic activities produce different isotopes of methane. Tracking the isotopes is a way to track which sources are the most active.

Modelling with a supercomputer

According to Prabir Patra, principal scientist at the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) and one of the lead authors of the study, carbon-13 is key. (Atoms of this carbon isotope have 13 nucleons: 6 protons + 7 neutrons.)

If there are fewer carbon-13 atoms than a certain level in a group of 1,000 methane molecules, the methane is from a biological source. If the methane is from thermogenic sources, such as trapped fossil fuels or geological activities, there will be more carbon-13 atoms in 1,000 molecules.

Mr. Chandra and Mr. Patra worked with scientists from Austria, Japan, the Netherlands, and the U.S. to collect data from the 12 monitoring sites worldwide tracking atmospheric parameters since the 1990s. Then they sorted the methane isotope data by year and ran it through a program they had developed to recreate the atmosphere from 1980 to 2020 on a supercomputer.

“One year of data analysis takes about four to five hours,” Mr. Chandra said.

Data mismatch

Finally, the team compared their own results with two emissions inventories, called EDGAR and GAINS, and found some discrepancies. EDGAR had reported that methane emissions from oil and natural gas exploration had increased between 1990 and 2020. GAINS had recorded a large “unconventional” rise in emissions since 2006. Their findings disagreed with both inventories.

Mr. Patra said combining the numbers for all biogenic and thermogenic isotopes should match the total emissions in a year. They also took insights from other available data like, number of rice fields, wetlands, dairy farms, biomass burning and likewise sources of methane emissions, and estimated the emissions from those sources. But when they ran their atmosphere models with this data, the year-wise total methane emissions overshot the total production.

In fact, the models said methane emissions from fossil fuels declined between 1990 and the 2000s and that they’ve been stable since. They also found microbes were producing more methane than fossil fuels.

Need for local data

One possible reason could be an increase in cattle-rearing in Latin America and more emissions from waste in South and Southeast Asia, Latin America, and Africa, the study’s authors wrote in their paper. They added that the number of wetlands worldwide had increased as well.

Studies in the past have pointed to microbes like anaerobic archaea as potentially top contributors of atmospheric methane using satellite data. But according to Mr. Patra, “Most studies that use satellites cannot measure the actual [changes over time] of methane.” Satellite data is interpreted using models “and thus are prone to uncertainties.” He said ground models are required to confirm these interpretations.

He added that their own atmospheric model was also only the beginning. The data for it came from observatories located in far-flung

places. “If you really want to ask what is from the wetland, what is from the rice fields, we need measurements in those exact locations,” per Mr. Patra. “We don’t have that kind of observation at all anywhere in the world to make that kind of measurement. We can only speak for global emissions.”

But what we do know is: “If you want to reduce methane, anthropogenic activity should be first controlled. And we can clearly outline what is anthropogenic here. Waste and landfills, rice fields, enteric fermentation, oil and gas, and coal,” he said.

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AMUL ANNOUNCES RS. 1 PER LITER INCENTIVE FOR MILK PRODUCERS WHO VOTE

May 2, 2024
https://dairynews7x7.com/amul-announces-rs-1-per-liter-incentive-for-milk-producers-who-vote/

To promote higher voter turnout in the upcoming Lok Sabha general elections on May 7 in Gujarat, Gujarat Cooperative Milk Marketing Federation Limited (GCMMF) -AMUL has announced an incentive for milk producers who participate in voting.

Shamalbhai B Patel, Chairman of GCMMF, announced that milk producers will receive one rupee per liter of milk if they show the voter ink mark on their fingers on the polling day. The decision was announced after the Sahakar Sammelan organized in Amreli and will benefit all milk producers associated with GCMMF.

Ashok Chaudhary, chairman of Dudhsagar Dairy in Mehsana, stated, “To raise awareness among voters and encourage them to vote, Dudhsagar Dairy has introduced a scheme wherein cattle breeders who display the voter ink mark on their fingers will receive an incentive of Rs. 1 per liter of milk. This scheme will benefit approximately 5 lakh milk producers associated with Dudhsagar Dairy. DeshGujarat

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Global News

THE LEVEL OF A2 PROTEIN IN NEW ZEALAND MILK HAS BEEN INCREASING RAPIDLY

May 15, 2024

https://dairynews7x7.com/the-level-of-a2-protein-in-new-zealand-milk-has-been-increasing-rapidly/

In recent years, the level of A2 beta-casein in New Zealand milk has been increasing rapidly and the level of A1 beta-casein has been correspondingly decreasing.

Unpublished data from New Zealand's leading herd-improvement cooperative, LIC, which was supplied to me on request, indicate that once the 2023-born dairy calves join the milking herd in 2025, these two-year-olds will produce beta-casein that is approximately 84% A2. In contrast, only 16% of their beta-casein will be A1.

This is a remarkable difference from the early to mid-1990s, when the proportion of A2 beta-casein in New Zealand milk was reported in various medical papers, using data from the New Zealand Dairy Research Institute, now part of Fonterra, as approximately 50%.

The 2024-born calves will produce milk that will almost certainly be even higher in the A2 variant of the relevant gene, probably about 86% and with A1 down to about 14%.

This high A2 beta-casein and low A1 beta-casein status that is now coming through into the next generation of New Zealand milking cows is unique in major dairy-exporting countries. However, the native cattle of Asia and Africa are all A2 except where the indigenous cattle have been crossed with European-type cattle.

The huge increase in New Zealand A2 beta-casein has occurred in the absence of any formal industry policy, partly by purposeful breeding by farmers and partly by breeding-company policy.

These breeding-policy decisions were linked to Fonterra's statement in February 2018 that "Fonterra Co-operative Group Limited (Fonterra) and The a2 Milk Company (a2MC) have today entered into a comprehensive strategic relationship that links Fonterra's global milk pool and supply chain, manufacturing capability and in-market sales and distribution capacity with a2MC's brand strength and capabilities".

It seemed clear that a2Milk and Fonterra were going to take on the world together.

Six years later it, has not worked out that way, although Fonterra does sell A2 milk here in New Zealand under the a2Milk brand. So, why does New Zealand dairy still need a strategic A2 policy?

An important insight comes from the announcement on 15 April this year by Seoul Dairy, which is South Korea's market-dominant dairy company, that they plan to be 100% A2 by 2030. Their reasoning is that 60% of South Koreans are supposedly lactose-intolerant, but the real intolerance of many of these people is now known to be to A1 beta-casein.

The other Korean companies will now have to give much thought as to whether they need to follow the market leader, which already has over 50% market share.

Of course, Korea is just one country. But Japan also has an A2 Milk Association, to whom I have given multiple presentations. Similarly, I have given A2 presentations to Indonesian audiences. Vinamilk, which is the biggest dairy

company in Vietnam, also produces A2 milk. And so on.

Across much of Asia, the benefits of A2 become immediately apparent to many of the consumers who try it. This is because with native Asian cattle all being A2, and milk consumption traditionally low, there has been no natural selection in Asian human populations toward A1 tolerance.

A considerable amount of the infant formula consumed in Asian countries is now A2, with this infant formula providing a spearhead into the broader dairy market. Human breast milk is also of the A2 type.

A 2015 scientific paper that I co-authored in the journal Nutrients on the issue of A1 intolerance being misdiagnosed as lactose intolerance, together with the interaction between intolerances to A1 and lactose, has been cited 149 times in papers by other scientists. If we were rewriting the paper now, we would have further important evidence to strongly support what we then wrote.

The question now for New Zealand is how it should respond to this dairy disruption while it is still at a relatively early stage. New Zealand can still be in the right side if the disruption, but only if it completes the conversion to A2.

New Zealand could now get to 100% A2 within about eight years, but only with an explicit policy.

Readers may well say, so what! Why would New Zealand want to do that given the recent melt down at Synlait?

In response, the evidence is clear that The a2 Milk Company (a2Milk) continues to do very well from A2 milk supplied by Synlait. It is now back within the biggest 10 companies of any type on the NZX. However, neither Synlait nor its A2 farmers have made ongoing fortunes from it.

There is a lesson there. It is all about who makes profits along the value chain.

The Synlait partnership with a2Milk went well for close on ten years, but now it is in big trouble. Problems have been brewing for several years but it is in the last year that the 'problem pot' has boiled over.

It should always have been evident to anyone who did a detailed analysis, that a2Milk had managed to structure their agreement with Synlait so that a2Milk came first, Synlait came second, and the A2 farmers came third. Right from the start it seemed obvious to me that farmers were getting the rough end of the agreement, but that reflected the reality of the power relationships.

Nevertheless, for quite some years everybody seemed happy. It took tough times to show that both Synlait and its farmers were getting the rough end of the deal.

Right now, it is Synlait's farmers that produce the milk, it is Synlait that processes the milk, and it is Synlait that holds the highly valuable factory accreditation to supply Chinese-label a2 Platinum infant formula into China. Yet it is a2Milk as the marketer that makes all the money from this as they pass it on to Chinese distributors.

However, the current failure of Synlait is not only related to the nature of their agreement with a2Milk. Many things have gone wrong.

More importantly, the problems of Synlait have nothing at all to do with the overall importance of A2 beta-casein as a global dairy disruptor. Quite simply, Synlait lost the plot as they got carried away with debt-funded expansion.

Part of the agreements that a2Milk managed to stitch up with both Synlait and Fonterra were that these companies would supply A2 milk only to The a2 Milk Company. I introduced CEOs from two European dairy companies to Synlait and Fonterra, with both seeking long-term agreements to purchase A2 milk powder, but in both cases the New Zealand

companies were tied to their agreement with A2M.

In the case of Fonterra, we were told that we would have to get three-way agreement that included a2Milk and so we headed across to Australia to see if a three-way agreement might be possible. But there was no chance of getting that agreement, given that a2Milk saw their existing agreement with Fonterra as effectively taking their biggest potential competitor out of the market.

To understand the opportunity that New Zealand now faces, the first point is to recognise that a2Milk has trademarks but no blocking patents. Accordingly, there must be renewal and exit clauses within the current licence that lead to an exit strategy with due notice. It would be remarkable if that were not the case.

The second key point is that some of the A2 beta-casein in New Zealand milk comes from cows that carry one copy of the A2 gene variant and one copy of the A1 gene variant. These cows produce both A1 and A2 beta casein in equal quantities. To produce pure A2 milk, all cows have to carry double copies of the A2 variant.

About 70 percent of the 2023-born calves carry double copies of the A2 gene variant. These percentage proportions vary between breeds, with Jerseys having the highest proportion of 2023-born pure A2 calves (86%), then KiwiCross (72%), then Friesians (59%).

Without getting into too much detail here, the big message is that farmers of all breeds could convert to pure A2 herds within one cow generation, but only by explicit breeding policies.

These breeding policies include only using bulls that are A2A2 and genetic testing of all calves. Using sex-selected A2 semen over 15-month heifers for the first round of mating can be a big help in pushing the programme along, particularly for Friesian herds which are lagging behind.

Inevitably, there will be a transition and there will continue to be some laggards. Hence, separating A1 from A2 milk at the factory gate will be necessary for quite some years, just as companies like Synlait and Mataura Valley Milk already have to do. During the transition, the amount of pure A2 milk would increase each year.

What is needed now is for a mature debate as to how the industry should develop an A2 future. That discussion needs to span the continuum of breeding, logistics, processing, health issues and marketing. Marketing is the big one.

There is a lot more that needs to be said and debated. I intend to write more about these issues.

WHAT ARE SOME OF THE HOT NEW FORMS OF DAIRY TECHNOLOGY IN THE FUTURE?

May 13, 2024
https://dairynews7x7.com/what-are-some-of-the-hot-new-forms-of-dairy-technology-in-the-future/

Embarking on an annual pilgrimage to the Animal Agtech Innovation Summit in San Francisco, Calif., swiftly followed by the World Agritech, should be the ideal time to take the temperature on all things agtech. The investor sentiment was undoubtedly cooler than in previous years, as indeed it is in the overall economy, with the sense that venture investors are sitting on the sidelines waiting for bigger exits than we have seen recently, and indeed some of the highest profile agri startup stars have recently been raising money on lower valuations than their previous rounds. So, in this context what is hottest from a dairy tech perspective?

Methane

The speed with which the market has decided that cow burps are the biggest thing to solve has been extraordinary, led globally by DSM's product 3-NOP, but not surprisingly this has attracted a host of alternative offerings. Feed additives based on seaweed, yeast enriched with bromoform (Number8 Bio), grains enriched with anti-methane compounds (Elysia), other active ingredients claiming to block methane production in the rumen (Rumen8, Agteria). Even garlic, probiotics and essential oil feed additives are joining the party. This new market promises hundreds of millions of dollars of new sales for feed additive suppliers, but who is going to pay for this is still unanswered. If not the consumer, milk processors or big food companies, then unless these supplements also increase dairy productivity how will this extra cost be absorbed by producers when margins are already tight?

More Sensors

The global growth in the use of wearable sensors continues on dairy farms but new generations of devices are arriving. The animal agtech event saw several lighter/more powerful GPS/Lora tags (Protag, Micro-tak) at lower costs being promoted. The ability to use GPS will increase the speed of finding the problem cows, without the need for wands, and particularly valuable for cows on pasture. Estimates of the numbers of tagged cows varies but led by Merck-Antelliq it probably covers half of all US cows today, and a presentation in San Francisco by SmaXtec underlined that rumen bolus sensors are growing even faster.

Nowhere for cows to hide.

A few systems using artificial intelligence to measure cow body condition (BCS) and mobility with cameras was presented at the summit by Dairy Robotics, feed disappearance and recently Ever.ag's release of a Maternity Warden. All of these systems promise to help farms with the most precious commodity – labor. Indeed the recent acquisition by GEA of Cattle-Eye and previously the Ever.ag's acquisition of Cainthus shows this market is generating real excitement.

Digital breathalyzer for dairy

Probably the most striking innovation was a startup called Agsent, a livestock diagnostic testing equipment which by analyzing the breath of cows and cattle claims to predict everything from diseases to pregnancy. Certainly, the ability to quickly diagnose an issue without the need for a veterinarian could be a game changer on larger farms.

The world of dairy-tech is just that, from all over the world. Indeed, several startups from India were re-imagining the use of 'Cow-GPT', blockchain, muzzle-printing recognition, and precision feeding. Although currently used on very small farms their US versions of these approaches could be round the corner.

Attended this year by over 3000 people the Animal Agtech event in San Francisco is a mecca for animal health, genetics, equipment, feed and food companies, investors, innovators, and startups. Even with less 'irrational exuberance' in evidence in terms of company valuations it was clear at this year's event that innovations will continue to arrive that represent real ways to prepare for the future.

Restating Carter Williams of iSelect comments 'Dairy tech startups need to be customer centric, develop a track record of iteration and experimentation, show the ability to solve acute customer pain while driving down costs with innovation. Meanwhile on your farm are you tech-ready?

A DRUG FOR COWS COULD CURB METHANE EMISSIONS FROM DAIRY CATTLE

May 11, 2024

https://dairynews7x7.com/a-drug-for-cows-could-curb-methane-emissions-from-dairy-cattle/

Bloomberg — The methane emitted by burping cows, sheep, goats and other livestock does more short-term damage to the climate than the world's passenger vehicles, by some estimates. A Boston-based startup says its new vaccine could take a big bite out of their emissions

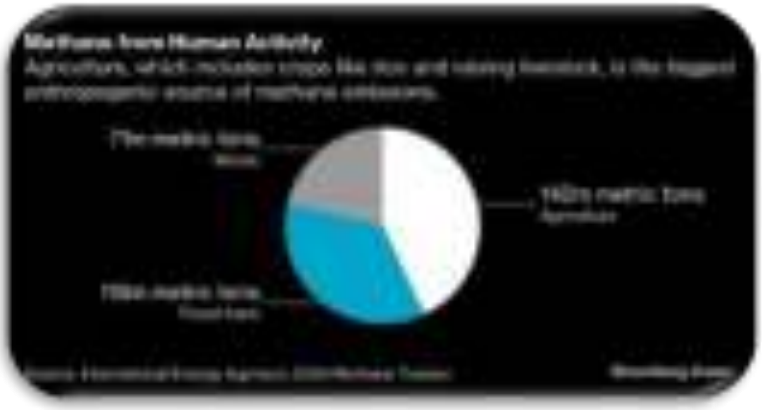
Ag-biotech company ArkeaBio says its drug targets methane-producing microorganisms that live in animals' saliva and digestive tracks. As of now, it's still in early stages and will be at least 2.5 years before it could be on the market.

But if successful, the drug would be a step towards tackling one of the world's most intractable climate challenges: curbing methane emissions from agriculture. The industry is the biggest source of human-generated methane, ahead of fossil fuels and waste, according to International Energy Agency.

"The tools to make a really good run at this haven't existed until the cost of sequencing and the cost of biotechnology came down substantially over the last five to 10 years," said Colin South, chief executive officer of ArkeaBio. The company is seeing "better-than-expected results" in cattle trials currently underway, he added.

To reduce animal methane emissions, researchers and startups have been experimenting with different feed additives including seaweed and biochar. Others have developed cattle masks that capture the potent greenhouse gas.

A Bloomberg investigation last year found that, while many of the world's biggest buyers of dairy and beef have declared an interest in encouraging their suppliers to use methane-curbing feed additives, few followed through at any sort of magnitude.



A vaccine could be distributed through existing agricultural supply channels, South said, noting that beef and dairy cattle already receive a wide array of drugs to prevent respiratory diseases, bovine diarrhea and other ailments.

"The opportunity to create something that fits in with normal farm practices, which is a vaccine and one which has no likelihood of impact in the quality of milk or meat, means that we've really got a huge addressable audience," he said.

Read more: Companies Aren't Using Quick Fix to Reduce Methane Emissions

ArkeaBio recently completed a $26.5 million Series A venture financing led by Breakthrough Energy Ventures, with new investment from the Centre for Climate Action Joint Venture Ltd., a public-private partnership owned by the New Zealand government and major agribusiness companies.

RABOBANK: RECOVERY IN GLOBAL MILK PRICES HAS 'COOLED' SLIGHTLY

May 9, 2024

https://dairynews7x7.com/rabobank-recovery-in-global-milk-prices-has-cooled-slightly/

The recovery in global milk prices evident in late 2023 and continuing into early 2024 has "cooled slightly" in quarter two, according to new research published today (Tuesday, May 7) by Rabobank.

The bank's latest global dairy quarterly report suggests that the tentative recovery in prices could now face "some additional headwinds".

Rabobank had expected to see "slow but steadier" price increases for 2024.

However it warned today that "excess rains" in Europe and other weather related issues had heavily impacted on milk output and it also pointed to weaker global demand and higher domestic milk production "limiting Chinese imports".

The bank's analysis indicates that buyers are "turning more cautious".

"Dairy buyers took advantage of low prices in late 2023 and early 2024 to replenish stocks.

"However in anticipation of a seasonal peak in northern hemisphere milk production sentiment is shifting in most regions, with purchasing slower at current price levels," Rabobank stated.

Milk prices

The latest global dairy quarterly report also highlights that demand recovery signals "are mixed" while customers' purchasing power remains under pressure chiefly because of high inflation in most countries.

Meanwhile specifically in Europe Rabobank identified that the late arrival of spring combined with the "surplus rainfall" has delayed "the seasonal flush".

"Extremely wet conditions continued into April and delayed the pastures season, especially in Ireland due to the reduced carrying capacity of pastures.

"In other parts of the region conditions have resulted in poor winter crop development delayed field work.

"Mild temperatures stimulated a better start of grass growth last year. As such the impact on milk volumes varies across the continent," Rabobank warned.

Its analysis also shows that EU and UK milk deliveries for January and February declined by nearly 0.5% year on year – including leap year calculations.

"Irish milk volumes dropped by 16.3% or 98,000mt, during this period while Dutch milk deliveries decreased by 2.7% or 63,000mt.

"Germany and the UK posted lower volume declines of 0.6% and 0.9%.

"On the positive side France recorded the first year on year growth – 0.1% of 3,000my since December 2022," the bank detailed.

It also noted that milk production in Spain increased by 1.6% and Poland saw the "strongest gains" with deliveries up 3.1% year on year.

But overall Rabobank believes that when it comes to market prices the current recovery "will be slower" than it had previously anticipated.

"The jump in prices in late 2023 and early 2024 appears to have been more a response to low prices and restocking than a sustained improvement in consumer demand in most regions.

"China's reduced dependency on imports will also be a headwind for the global dairy market in the coming months, " the bank cautioned.

CHINA'S DAIRY INDUSTRY – MARKET TRENDS AND OPPORTUNITIES

May 9, 2024
https://dairynews7x7.com/chinas-dairy-industry-market-trends-and-opportunities-2/

The dairy industry in China has boomed following the rise in incomes and living standards seen in recent decades. Previously a luxury product available only to the few, milk and dairy are increasingly becoming staples of the kitchen table, driven by changing attitudes and tastes. At the same time, the market has significant room for growth, with large parts of the population underserved. We look at the latest trends and changes in China's dairy market and discuss opportunities for investors in this growing market.

China is home to the world's second-largest market for dairy products after the United States. While dairy has not traditionally formed a part of the staple diet in China, the significant increase in incomes and living standards over the last four decades has helped make milk and dairy an increasingly common feature at the dining table. Today, milk and dairy are viewed as a crucial component of a healthy diet, particularly for children.

Despite the increase in dairy consumption in China since the 1980s, the market still has considerable room for growth. Absolute sales and consumption figures continue to surpass most other markets, but per-capita consumption remains significantly lower than in other middle- and high-income countries. Moreover, wealthier urban households consume dairy at much higher rates than rural households, meaning a large part of the population remains underserved.

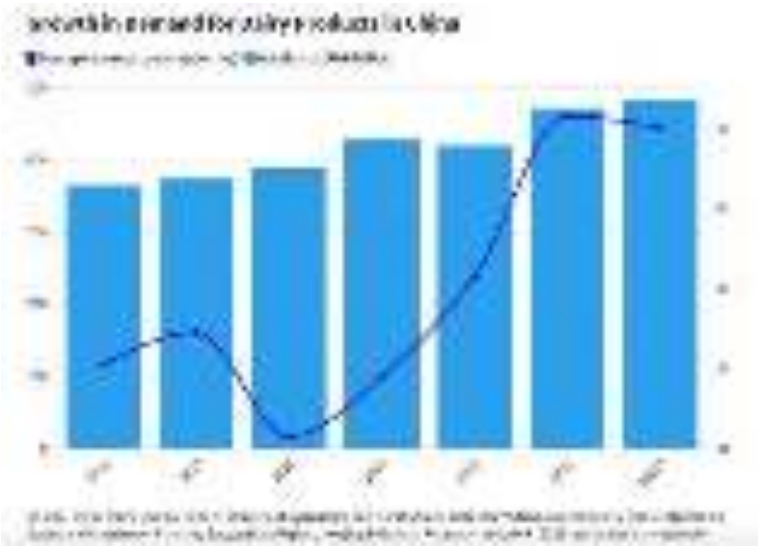
As the market has grown, various trends have emerged that are shaping the industry landscape. Whereas milk was previously mainly consumed in powdered form, pasteurized fresh milk and ultra-high temperature (UHT) milk have now become the most popular product segment. The rise in coffee consumption and the proliferation of milk tea stores are also driving the consumption of both fresh and powdered milk. Meanwhile, smaller market segments, such as cheese and butter, are also on the rise, thanks in large part to the increasing popularity of home baking and premium Western food products among wealthier urban households.

Overview of the dairy industry in China

China's dairy industry is estimated to have exceeded RMB 500 billion (US$69.6 billion) in 2023, per projections from the China Business Industry Research Institute.

Meanwhile, according to a report by the Huajing Industrial Research Institute, retail sales grew by an average CAGR of 5.3 percent between 2016 and 2021 and are expected to maintain a CAGR of around 4.8 percent between 2022 and 2026 to reach RMB 596.65 billion (US$83 billion).

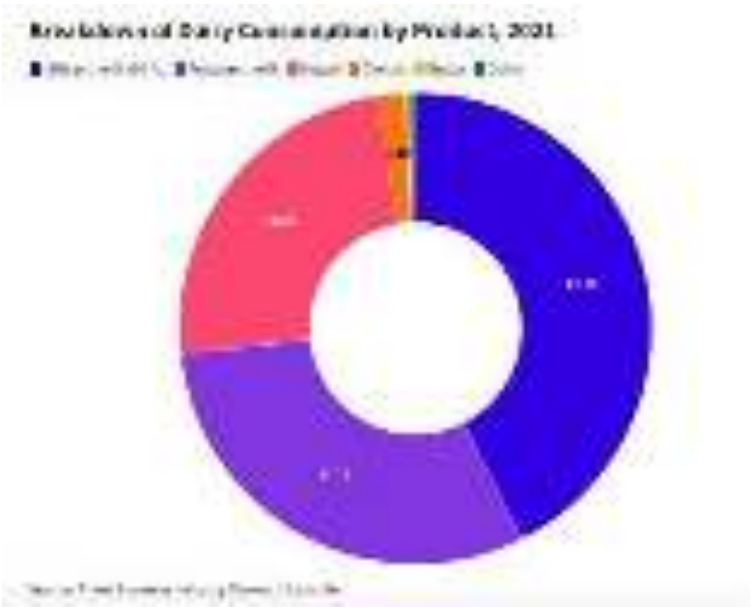
Demand for dairy products has risen steadily in China across the last decade, as seen by gradual increases in dairy sales and consumption. In 2021, total retail sales of dairy products reached RMB 468.7 billion (US$65.2 billion), according to the China Business Industry Research Institute.



Meanwhile, the per capita consumption of dairy rose from 36.1 kg per person in 2016 to 42 kg per person in 2022, per data from the Ministry of Agriculture and Rural Affairs (MARA). This is only around half the annual per capita dairy consumption of South Korea and less than a fifth of that of the US.

Fresh milk and milk-based drinks form the largest segment of the dairy market, accounting for 42.5 percent of dairy consumed in 2021, according to the China Business Industry Research Institute. This is followed by powdered milk, accounting for around 32 percent of dairy consumed, and yogurt at 24 percent.

The fastest-growing market segment in China is low-temperature pasteurized milk, more commonly known as fresh milk. According to Founder Securities Research Institute, the market grew at a CAGR of 9.4 percent between 2018 and 2022, outpacing the other liquid milk segments, and reached RMB 39.1 billion (US$5.4 billion) in 2022.



The yogurt market is experiencing rapid growth, similarly experiencing a CAGR of 8.4 percent between 2016 to 2021 according to the China Yogurt Industry Development Trend Analysis and Investment Prospects Research Report (2023-2030). The sector is estimated to have reached RMB 171.33 billion (US$23.8 billion) in 2022.

Within the powdered milk sector, a split has emerged in the demand for infant milk formula and adult milk powder. The infant formula market in China has begun to see a slight decrease in recent years due to declining birth rates, as well as an increasing preference for breastfeeding over bottle feeding with infant formula. According to research from Euromonitor, while the market grew at a healthy rate of 7.9 percent from 2018 to 2019, it slowed to 0.5 percent from 2019 to 2020 before contracting by 2 percent between 2021 and 2022.

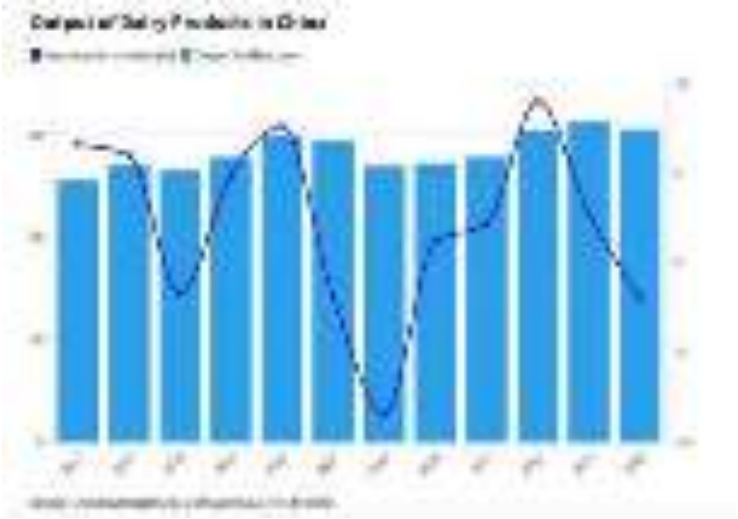
However, the outlook of the adult powdered milk industry is much brighter. Thanks in part to increasing demand among middle-aged people, the market size of the adult powdered milk segment is projected to grow from RMB 18 billion (US$2.5 billion) in 2021 to around RMB 20 billion (US$2.8 billion) in 2022.

Supply of dairy products

China's domestic production of dairy has increased substantially in recent decades, following the uptick in consumption. The number of dairy cows in China has increased from 5.7 million dairy cows in 2001 to 7.1 million in 2023. The bulk of China's milk production is located in north and northeastern China, in particular in Inner Mongolia, Heilongjiang, Hebei, Ningxia, Shaanxi, and Shanxi provinces.

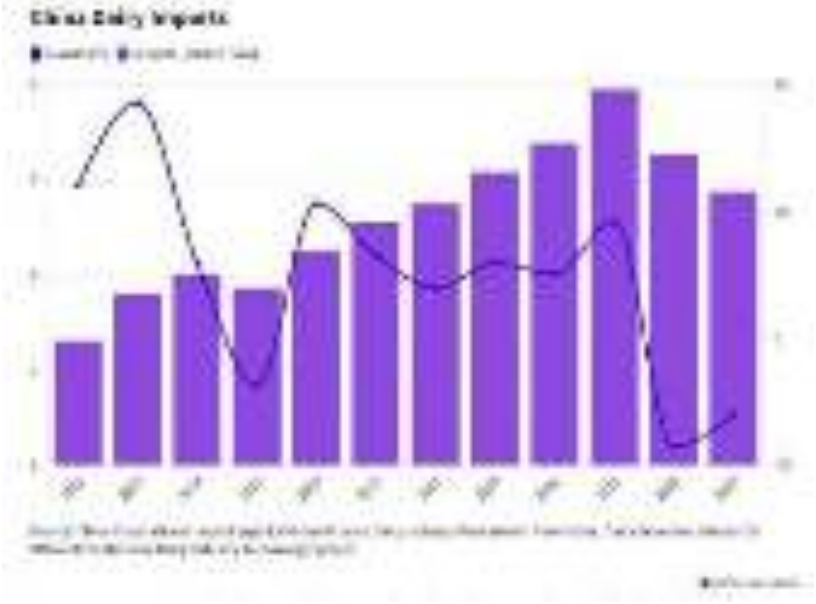
China's domestic output of cow's milk and dairy products has risen steadily in recent decades, with dairy product output growing at a CAGR of 1.5 percent from 2012 to 2023. In 2023, China produced around 30.5 million tons of dairy, according to the National Bureau of Statistics (NBS). Meanwhile, the production of milk reached a total of 39.31 million tons in 2022, up from around 30 million tons in 2013.

The one exception to the growth in production is the powdered milk segment. The domestic output of powdered milk dropped from 1.6 million tons in 2013 to under 1 million tons in 2022. This has partly been attributed to falling domestic demand as a result of the declining birth rates.



While China has increased its domestic supply of dairy, the country continues to import large amounts of dairy products and milk from other countries. Imports of dairy dropped in 2022 and 2023, following the trend of generally low imports during these years due to a drop in domestic demand. Nonetheless, dairy imports have risen steadily from 1.3 million tons in 2013, to a peak of 3.95 million tons in 2021.

The top source countries for imported dairy products by volume are New Zealand, the US, the Netherlands, and Australia. New Zealand alone accounted for 43.2 percent of China's total dairy imports in 2022, according to research published by the China Animal Husbandry Magazine. The US accounted for the second-largest portion, at 18.1 percent of total imports.



Within the fresh milk segment, China's dairy industry is dominated by domestic brands. The single largest dairy company is the Inner Mongolian Yili Group, which in 2022 had a market share of 21.2 percent, according to data from Euromonitor. The second-largest market player is Mengniu Dairy, also from Inner Mongolia, which held around 16.3 percent market share in 2022. The largest company for Chinese imports of dairy is the New Zealand company Fonterra, with China accounting for around one-third of the company's exports.

Among other segments, some foreign brands are also dominant players. In the ice cream segment, for instance, the Uniliver-owned Wall's brand comes second by market share after Yili. Meanwhile, in the

much more fragmented yogurt segment, Nestle, Danone, and Yakult are among China's top five providers, along with Yili and Mengniu.

In the cheese segment, many foreign brands enjoy a high level of recognition, with products from Laughing Cow, Anchor, Kraft Foods, President, Bridel, and Mainland frequently having shelf space in Chinese supermarkets.

Government policy

The growth of China's dairy market has been spurred in large part by government support. The Chinese government has long framed dairy products as an important element in developing the economy and society. In particular, dairy products have been highlighted as one of the food products that can help China achieve food security, due to its relatively low resource requirements compared to the production of meat.

In recent years, the government has sought to increase the domestic production of dairy to reduce the reliance on imports.

In a set of opinions released in 2018, the State Council set out a range of goals to increase the production of dairy by opening up new areas of the country to milk production, such as the south of China, improving cattle breeding systems, and implementing technologies such as the Internet of Things (IoT) to the production to improve efficiency.

The opinions also stressed the importance of improving the regulatory environment and ensuring that domestically produced milk adheres to high standards, addressing past safety and quality issues that have appeared in production lines. The opinions also called for efforts to bolster the image of the dairy industry in China by publicizing achievements in farming, processing, and quality supervision in order to enhance consumer trust and confidence in domestic products.

In February 2022, MARA released the "14th Five-Year Plan" Action Plan for Improving the Competitiveness of the Dairy Industry, which sets out a range of goals for the development of the dairy industry. These include increasing the production output of dairy products to 41 million tons by 2025.

Among the measures proposed to boost the dairy industry in the plan is to increase capital investment. The plan calls on local governments to coordinate the use of central and local fiscal subsidies, financial capital, and other channels of funding support to support local industries. Governments are also encouraged to support companies to enhance the dairy industry's competitiveness through methods such as mergers and acquisitions and equity participation.

In order to match supply and demand, the plan will harness the role of consumption in driving production development, strengthen public welfare and popular science promotion, showcase the "fresh" advantages of domestic milk sources, promote diversification and localization of dairy consumption, and enhance the competitiveness of the dairy industry.

In recent years, China has been striving to improve the safety standards of dairy products within the country. This includes placing stricter policies on the import of certain dairy products, including fresh milk and infant formula. For instance, in December 2021, China's General Administration of Customs issued new inspection and quarantine requirements for the import of dairy products, which included new health certificate requirements and quarantine procedures for the import of raw milk, raw dairy products, pasteurized milk, and other prepared milk products.

Since January 1, 2018, all infant formula products, whether manufactured in China or imported into the country, have been required to obtain a registration certificate from the State Administration for

Market Regulation (SAMR), which must be visibly displayed on the product's label and instruction booklet.

In January 2023, the SAMR introduced new regulations on registering the recipes of infant formula. The new regulations include strict formula registration and inspection requirements, as well as enhanced labeling standards and consumer protection requirements.

Opportunities in the dairy industry in China

China's dairy industry offers diverse opportunities across various market segments. In the liquid milk segment, there is considerable opportunity for premiumization, where companies can cater to health-conscious consumers by offering organic, grass-fed, or specialty milk products. Moreover, the demand for fortified milk products, enriched with vitamins, minerals, and functional ingredients, presents an avenue for companies to meet the specific health needs of consumers.

While the market is considerably smaller, imported cheese continues to enjoy strong demand, especially premium varieties from Europe and other renowned cheese-making regions. Similarly, there's a growing market for high-quality butter, appealing to consumers seeking high-quality ingredients for culinary endeavors.

Chinese consumers have long had a taste for probiotic yogurt and other fermented dairy items as an awareness of gut health has grown. The sustained growth and relative fragmentation of the yogurt sector compared to other dairy sectors also allows for more competition, and there is ample room for innovation in flavors and formats to cater to consumers' evolving preferences for variety and novelty.

While the infant formula industry has been on the decline, demand for adult powdered milk continues to grow, presenting an opportunity for companies to offer premium, high-quality products sourced from trusted suppliers.

In the food service and hospitality sector, there's a demand for reliable dairy supply chain solutions to meet the needs of restaurants, cafes, hotels, and catering services. Additionally, customized dairy products tailored to specific requirements in terms of flavor profiles, packaging formats, and shelf stability are sought after by food service providers.

About Authors

China Briefing is written and produced by Dezan Shira & Associates. The practice assists foreign investors into China and has done so since 1992 through offices in Beijing, Tianjin, Dalian, Qingdao, Shanghai, Hangzhou, Ningbo, Suzhou, Guangzhou, Dongguan, Zhongshan, Shenzhen, and Hong Kong. Please contact the firm for assistance in China at china@dezshira.com.

GDT DAIRY PRICE INDEX MOVES UP BY 1.8% CHEDDAR LEADS THE GROWTH RALLY

May 8, 2024

https://dairynews7x7.com/gdt-dairy-price-index-moves-up-by-1-8-cheddar-leads-the-growth-rally/

After going backwards in March, the Global Dairy Trade market has recovered its momentum, with the 2024 New Zealand dairy season likely to end on a high note.

In the latest auction, whole milk powder rose 2.4% and cheddar 6%, contributing to the GDT index rise of 1.8%.

Anhydrous milk fat prices are now the highest in the 15-year history of the GDT, reaching $US7124/tonne.

They have increased by 60% over the past year.

At a whisker under $6600, butter prices are also close to the record $7000 reached in mid-2022.

In the past six months the GDT price index has risen 12%, overcoming that 5% fall in March.

Over the whole season the market movement for reference products has been positive by 10%, which reinforces the current farmgate milk price predictions of $8/kg milksolids.

While that is not the $9-plus payouts of the 2023 season, it is nonetheless a good, welcome outcome to an up-and-down 12 months.

The Fonterra forecast opened last May at $8 mid-point and dropped to $6.75 in late August after WMP prices dropped 10% in one auction.

A not-so-steady recovery since then has seen the GDT index rise a total of 30% from the trough until now, near the end of the season.

The latest confidence in the market won't do much to influence the milk price in the season just ending, but it will inject confidence into the first 2025 forecast, due out at the end of May.

MILK PRODUCTION MAKES WHITE REVOLUTION IN BANGLADESH

May 7, 2024

https://dairynews7x7.com/milk-production-makes-white-revolution-in-bangladesh/

Bangladesh has achieved remarkable success in milk production in recent years as the production amount has increased by manifolds.

At present, 83.45 per cent of the total demand for milk is met from local sources, according to the Department of Livestock Services (DLS) data.

Stakeholders said milk production has risen in recent times due to the spread of information technology, employment generating scope for young people and expatriates' investment in the sector.

DLS data shows that 95.68 lakh tonnes of milk were produced in the last eight months (till February) against the production target of 140.10 lakh tonnes for the ongoing 2022-23 financial year.

Data also shows that the annual milk production was 50.70 lakh tonnes in FY2012-13 and it jumped to 130.74 lakh tonnes in FY2021-22.

Also, the annual milk production was 119.85 lakh tonnes in FY2020-21, 106.80 lakh tonnes in FY2019-20, 99.21 lakh tonnes in FY2018-19, and 94.06 lakh tonnes in FY2017-18, according to DLS data.

DLS Director (Production) Dr ABM Khaleduzzaman told The Business Post that the revolutionary change came due to several steps, including the improved breed of cows through artificial insemination, training, technical support and creating awareness.

"Our success in artificial insemination is the key factor behind the white revolution in milk production in the country," he said. "Due to artificial insemination, we are now getting up to 4.5 litres of milk from each local cow. Earlier, we used to get only 2 litres from the same cow."

"Also, we are now getting on average 10 litres of milk from a Shankar breed cow, where we used to get only 5 litres from the same cow earlier," he added.

With the help of DLS, farmers are now cultivating improved breed grass in the country and that is improving milk yields from cows, he said.

Bangladesh Dairy Farmers' Association (BDFA) General Secretary Shah Emran also told The Business Post that the sector saw revolutionary growth in recent years due to the rising involvement of young people, the development of information technology and expatriates' investment.

However, despite the growth in milk production, the demand is not increasing due to the lack of diversification of dairy products.

According to farmers, lack of skilled manpower, non-supply of quality milk, shortage of veterinarians, inability to process and store milk, and non-availability of fair prices are major obstacles in the sector.

They blamed the import of various milk products in the country for the lower price of locally produced milk. They also urged the government to raise customs duty on imports to boost the local milk sector.

Annual demand 152 lakh tonnes

DLS sources said at least 90 per cent of the country's total produced milk comes from cows, making it the prime source, while 8 per cent comes from goats and 2 per cent comes from buffaloes.

The average availability per head is only 175 ml in a day, as per the DLS data, which should be at least 250 ml milk daily.

In FY22, the country produced 130.74 lakh tonnes of milk against an annual demand of 152 lakh tonnes, leaving a deficit of 21.26 lakh tonnes.

Bangladesh has retained the second position in the world in goat milk production for four consecutive years while it came in 23rd in total milk production.

According to BDFA, there are around 8-10 lakh small and big dairy farms across the country at present, where more than 2 crore people are directly or indirectly involved.

The estimated investment in the local dairy farm sector now is over Tk 90,000 crore.

Only 10%of raw milk processed

Meanwhile, farmers said the raw milk goes bad within a very short time due to a lack of enough processing and powder-making infrastructure, which forces them to sell 90 per cent of the total produced milk at the local markets immediately at a lower price.

The rest 10 per cent goes to brands like Milk Vita, Pran, Farm Fresh and Aarong companies/brands that produce pasteurised milk and dairy products, they said.

At least 14 companies, registered under Bangladesh Standards and Testing Institution, produce and supply pasteurised, milk and dairy products to the markets.

They are Bangladesh Milk Producers' Cooperative Limited (Milk Vita), Pran Dairy Ltd (Pran Milk), Aftab Milk and Milk Producer Ltd (Aftab Milk), Akij Food and Beverage Ltd (Farm Fresh Milk), American Dairy Limited (MOO), Baro Awlia Dairy Milk and Foods Ltd (Dairy Fresh), BRAC Dairy and Food Project (Aarong Dairy), Tania Dairy and Food Products (Safe), Danish Dairy Farm Ltd (Ayran), Ichhamoti Dairy and Food Products, Igloo Dairy Limited, Uttar Bango Dairy, and Purbo Bangla Dairy Food Industries.

Among the brands, Milk Vita, Aarong and Pran are dominating the pasteurised milk market with around 80 per cent share, leaving the rest 20 per cent to other brands.

Prices

The price of one litre of milk is about Tk 70-80 in Dhaka city. But the prices vary between Tk 40 and Tk 70 in rural areas.

After processing, most of the companies sell a litre of pasteurised milk at Tk 85-90 and UHT (ultra-heat-treatment) milk at Tk 100-120 per litre.

Besides, dairy products including ghee, butter, ice cream, cream and rasmalai are sold at various prices from Tk 1,200 up to Tk 1,500.

Powdered milk price also varies depending on different brands. The average price of a kg of powdered milk is Tk 700-800 and full cream milk powder is Tk 800-900.

Govt project to boost sector

To give the sector a necessary boost, the government is implementing a Tk 4,280 crore project, titled Livestock and Dairy Development Project, with the help of the World Bank.

To strengthen the milk marketing system, 300 Village Milk Collection Centres are being set up around the country under the project.

Also, farmers will be brought under small associations at every upazila, where there will be a hub for collecting and processing milk for a temporary time.

From the small hub, the processed milk will go to large plants owned by the government and private companies.

The project aims to ensure fair prices for the farmers and turn them into entrepreneurs.

Farmers struggle as animal feed prices rise

Meanwhile, dairy farmers are now struggling as their production costs are significantly increasing due to the soaring animal feed prices.

Traders and manufacturers said the reasons behind the feed price hikes include the volatile condition of the domestic and global crop markets after the Covid-19 pandemic eased, interruption in the global supply chain following the Russia-Ukraine war, rising freight costs, and the devaluation of the taka against the dollar.

“Against the high price of animal feeds, farmers are not getting fair prices for the milk they produce. Many small dairy farms even had to quit business due to the crisis in recent times,” said BDFA leader Emran.

He blamed the availability of low-priced imported milk powder in the market and the lack of sufficient milk-processing infrastructure for the poor price of locally produced liquid milk.

“The local milk processing companies are buying only 10 per cent of the total production. So, a substantial amount of produced milk goes to waste every day as the farmers cannot sell such a huge amount of unprocessed milk,” he added.

Emran sought the government’s support to ensure sufficient milk-processing infrastructure for the development of the dairy sector.

Govt aims for self-sufficiency in 10 years

Officials said the Ministry of Fisheries and Livestock is working to achieve the target of 20 million tonnes of milk production by 2031 and 30 million tonnes by 2041 to meet 100 per cent of national demand locally.

If timely steps can be taken for these targets, ministry officials said, the country will be able to become self-sufficient in milk production and keep a surplus within eight-nine years.

Apart from discouraging the import of powdered milk, the government is also providing various incentives and low-interest loans to develop the dairy industry and its infrastructure, they said.

The government is planning to provide various types of assistance including tax exemption at source in the import of machinery to produce different types of dairy products from milk.

DLS Director Khaleduzzaman also said they have stopped the import of low-quality powder milk with the help of the National Board of Revenue.

If milk production continues like the past few years, the country will become self-sufficient soon, he added.

THE IDEA OF VEGANISM IS CONSIDERED TOO "MILITANT" FOR MANY

May 7, 2024
https://dairynews7x7.com/the-idea-of-veganism-is-considered-too-militant-for-many/

There it sits, in all its flaky glory, with a crust the colour of autumn leaves, and two plump claws almost begging to be torn off and devoured. Light as air and as French as the guillotine.

One impeccable croissant.

But this particular pastry – among dozens crowding a display shelf in an unremarkable looking boulangerie in central Paris – is no ordinary offering. Far from it. For this is a butter-free croissant, a crisp swerve away from more than a century of devout culinary tradition and a nod towards larger forces seeking to reshape French food and agriculture.

Sacrilege has rarely looked so seductive.

"I'm changing the world," grinned Rodolphe Landemaine, between mouthfuls of a lovingly laminated, butter-free, pain au chocolate.

Landemaine, a baker, now owns five busy boulangeries in Paris, with more on the way in other French cities, all serving entirely dairy-free products to a mostly local clientele.

Not that he advertises the absence of butter, or eggs, or cows' milk, in his shops. Indeed, the word "vegan" never crosses his lips.

"It's not an easy word for French people to get used to. It's very difficult for them to give up on butter and eggs," he acknowledged, explaining that the idea of veganism is considered too "militant" for many.

Instead, Landemaine, a vegan with an interest in animal welfare and climate change, has adopted a stealthier approach, hoping customers will fall in love with his croissants, madeleines, quiches, sandwiches, flans and pains au raisins before they realise, too late, that butter has been replaced with a secret blend of plant-based products.

And if he can persuade conservative French taste buds to tolerate croissants "sans beurre" then perhaps, the argument goes, anything is possible.

As if on cue, a young boy walked past us, clutching the remains of a flaky claw, which he loudly declared to be délicieux.

"It tastes lighter," said a musician named Anne, 42, nibbling the end of her croissant.

"It's really good. I don't think I would recognise the difference," said Marta, a visitor from Poland, of her pain au chocolat. She's not a vegan but noted that she often got a scathing look from French waiters if she ordered oat milk with her coffee.

"I see the judgement in their eyes because it's just not part of their culture," she added.

For a country grappling with all sorts of new influences, such as challenges to its long-standing policy of state secularism, or le wokisme of imported "Anglo-Saxon" culture wars, a few unusual pastries can hardly be considered a major threat.

And yet the issue brushes some raw nerves here, from French people's deep but evolving relationship with the terroir or land, to the escalating farmers' protests across Europe, to the upheavals brought on by climate change commitments, to France's almost religious devotion to certain culinary customs. And all this in the shadow of June's European Parliament elections, which look likely to usher in big gains for far-right parties in France and beyond.

"Not for me, no way," said Thierry Loussakoueno, with mild indignation, appalled by the very idea of a butter-free croissant.

Loussakoueno was busy, one recent morning, judging a traditional croissant competition in a wood-panelled conference room close to the River Seine in central Paris. The event, one among dozens, was organised by the Paris office of the French Union of Bakers and Pastry Makers and sponsored by a group of dairy farmers from south-west France. The French food industry has a collective reputation for being highly organised, conservative, and quick to self-defend.

"I don't understand these vegan pastries. I can understand people who don't eat meat for whatever reason, and I respect this completely. But dairy products and butter are just too important in the taste of food and not using them is just too bad and a pity," said Loussakoueno, a Parisian civil servant.

Other judges and competitors, sniffing and prodding a succession of crescent-shaped creations, spoke of the need to protect French farmers.

"It's difficult for me to even talk about making a croissant without butter. There's a whole family who are behind this – lots of people involved in the process," said Olivier Boudot, a cookery teacher.

An hour's drive northwest of Paris, near Amiens, in a large barn surrounded by gentle green hills, a muscular, 700kg Holstein cow manoeuvred herself into an automated milking enclosure, watched by her owner, Sophie Lenaerts.

"Amazing machines," said Lenaerts, as a mechanical arm swung four suction cups beneath the cow, who was casually relieved of a dozen litres of milk, destined for a nearby butter factory.

Lenaerts, 57, has more pressing concerns than the perceived threat of vegan croissants sold to metropolitan consumers. And yet the issue rankles.

Like many small farmers in France and beyond, she has spent much of the past few months angrily organising protests against a European Union-wide agricultural system which she feels is destroying her industry. She's planning another trip to Brussels this month to help block roads near the European Union's headquarters.

Sitting later in her snug farm kitchen, Lenaerts railed against imports of cheaper, sub-standard foreign food goods, against the huge mark-ups that distributors and middlemen impose on her produce, and against the sense that farmers are too often left as scapegoats for all climate-related issues.

"I have grandchildren. I want the best planet for everyone. But it's always the farmer that gets the blame," she said.

Vegan croissants were, for her, merely an indicator of the broader "industrial madness" that involves shipping unusual foods around the globe in order for "certain food companies" to make a profit. A combination of cynicism and virtue-signalling.

Lenaerts looked through a rain-speckled window towards her fields. Ninety-eight percent of her cows' food is produced on the farm. Almost all the food her family eats is bought from her neighbours, just a cycle-ride away. Surely, she explained, this is the way to tackle climate

change, and a host of other challenges. Instead, this "virtuous circle" is already on the brink of extinction.

"The fear of losing French agriculture is the fear of losing our heritage, our land. It's the farmers that maintain our landscape and make France a country for tourism. When no farmers are left, when no cows are left, it will be much worse. But I think we're at a turning point in terms of awareness," Lenaerts continued, pointing to strong public support for the recent farmers' protests.

"If everyone makes a small effort to eat well, to pay attention to what they're buying, things should go in the right direction."

There are some encouraging signs of that.

Off a narrow street in the fashionable Marais district of Paris, six women stood, in solemn concentration, in a gleaming restaurant kitchen, carving up the morning's delivery of plump asparagus spears, salad heads, kumquats, and radishes.

Gliding between them, the owner and chef, Manon Fleury, was still basking in the delight of being awarded a first Michelin star for her restaurant, Datil, in March. Fleury, once a junior fencing champion, has received a lot of attention in France for her energetic attempts to challenge a male-dominated restaurant industry, but her cooking – with a focus on "mostly vegan, poetic" recipes – is also seeking to nudge French food culture in a new direction.

Hers is by no means the only restaurant of its kind in Paris, but visitors – including the millions soon to descend on the city for the Olympic Games in July – may notice the extent to which meat and dairy-loving France lags far behind London, for example, in offering even the barest nod towards vegetarian options.

"The French tradition is quite heavy," Fleury admitted.

She acknowledged the cost involved in trying to break away from larger suppliers and sticking to a smaller network of trusted organic farmers.

"There is more and more interest in this kind of cuisine, but it has to be in harmony and balance," Fleury said, trying to sound both reassuring and radical at the same time.

"Sometimes you have to be radical to change the world," she said.

A little revolution?

"Yes, kind of. But with a lot of kindness."

Back at the bakery, perhaps 15 minutes by bicycle from Fleury's restaurant, the morning rush of customers was slowing down. One last, lonely, croissant sat waiting behind glass. Landemaine, the owner, said his business was growing fast, with new outlets opening soon in Bordeaux, Lyon and Rennes, with strong interest from the UK, Dubai and elsewhere.

But perhaps more significant was the notice that he said other French food companies were taking in his success.

"They sense the market is changing. One reason (for their interest) is that butter has been so expensive for several years," he said.

Still, Landemaine acknowledged that the road ahead remained steep.

"It's changing. But not so quickly," he said, as one of his bakers emerged from the basement kitchen, carrying a tray laden with dark, light-as-air, butter-free, chocolate tarts.

NEW COW'S MILK SUBSTITUTE MAY IMPACT NEW ZEALAND DAIRY

May 6, 2024
https://dairynews7x7.com/new-cows-milk-substitute-may-impact-new-zealand-dairy/

Scientists have found a new way to make a substitute for cow's milk that could have a radical effect on the dairy industry.

It's called precision fermentation – creating cow protein in the lab – and could replace dairy ingredients, which make up a significant proportion of New Zealand's export market.

"Precision fermentation of dairy proteins which creates a very easy pathway for creating proteins without using dairy cows," University of Otago Professor Hugh Campbell explained.

"If this area takes off, it improves New Zealand's economic prospects because a whole lot of things happen that are high value, but it does shrink our livestock footprint on the land."

Food technologist Anna Benny has worked in food science for decades and has found herself living on a dairy farm in South Otago, so she has a unique perspective on the future of the dairy industry.

"My concerns are we are right in the firing line if this technology can take off," she said.

Benny said New Zealand was vulnerable because three-quarters of our dairy exports could be replaced.

"The types of products that precision fermentation will produce are ingredients and powders. The types of products that we specialise in."

A new study funded by the National Science Challenge looked at how alternative proteins, which also include plant-based proteins and meat grown from cells, could have a major impact on land use in New Zealand, with one scenario predicting a 35 percent reduction in land used for dairy farming.

While bad news for dairy, the study found employment and economic output would be boosted in a scenario where farmers switched to growing crops, which would also result in significant reductions in emissions and nutrient loss.

Fonterra has been researching and investing in precision fermentation for several years. It says while scaling it to industrial scale is possible, there will be challenges – like a shortage of sugar to use as feedstock and precision fermentation can't yet create the nutrients found in milk.

"I can't see parents ever being happy putting lab-grown meat and milk in their kids' lunchboxes… it's just not gonna happen," Federated Farmers dairy chair Richard McIntyre said.

But Benny said it's New Zealand's high-value dairy products like lactoferrin – a protein derived from milk – that are most at risk of disruption.

"When you're competing a dairy-extracted protein versus something that can be made in a tank, that's the same as mother's milk, there's not really any contest there."

Researchers warning New Zealand needs to invest in research, or be left behind.

"No one who's working in the R&D space in agriculture and across the whole research sector thinks we're in good shape at the moment," Campbell said.

It's time to prepare for big shifts on the horizon for farming as we know it.

IS AVIAN INFLUENZA A THREAT TO THE DAIRY INDUSTRY?

May 4, 2024
https://dairynews7x7.com/is-avian-influenza-a-threat-to-the-dairy-industry/

The ongoing highly pathogenic H5N1 avian influenza – commonly known as bird flu – outbreak is one of the hardest hitting in history. Since 2020, it has led to the deaths of "an unprecedented number of deaths in wild birds and poultry", according to the WHO. It spread to North America in 2021 and has wreaked havoc on poultry populations since then, leading to the suspension of meat sales from certain states earlier this month.

More concerning still is the spread from poultry to mammal populations, particularly cows. At the time of writing, 34 herds of dairy cattle across nine US states are confirmed to be affected, raising fears in the media over a lack of testing. This is due in part to the confirmation that the disease has spread in at least one case from cattle to humans. Since the Covid-19 pandemic, governments and the general public are naturally worried about the costs of ignoring up-and-coming public health risks, especially of the zoonotic kind.

There is good news, however. Only dairy cattle have been infected so far and the spread of the infection, too, appears to be low.

In an interview with Just Food, Alexander Anton, secretary general of the European Dairy Association (EDA), said: "You have 33 dairy holdings that are affected out of around 30,000 in the US. In Europe, in terms of poultry – the species that is most concerned by avian influenza – we haven't seen a lot of outbreaks last year. We've known for at least ten years that it spreads to other animals. We had foxes ten years ago but we haven't seen anything at European level [for cattle]."

Anton also noted that it is currently flu season and expects the spread to slow as the weather warms.

From the available evidence, it also seems pasteurisation is capable of deactivating the virus, keeping milk and cheese safe even if unknowingly taken from sick cows. This is good news for producers, as the US Food and Drug Administration has also found that one in five of its tested retail samples contain viral fragments of HPAI.

Mitigation

Tracking and containing the virus remains vitally important. While many cows appear to be asymptomatic, and still capable of producing milk, the risks of further mutation increase the more widely the disease is spread.

Dr. Daisy May, veterinary surgeon and current writer for All About Parrots, told Just Food: "The public health risks remain relatively low for the time being. But we have to take this incursion into the cattle industry extremely seriously from a food supply standpoint.

"Intensive testing and monitoring on farms, at auctions, processing facilities – anywhere cattle co-mingle – will be absolutely critical for early detection and containing hot spots. Depopulation and virus elimination protocols may need to be activated at any newly identified infected premises to prevent further spread."

Testing will reduce international fears over US beef and dairy supplies, Dr. May said. "You can bet international trade partners will be scrutinising the US response closely, too, looking for any chance to rationalise import restrictions that could devastate the beef and dairy industries economically."

The US dairy export market is worth around $8bn and the beef market nearly $10bn. Beef currently seems unaffected by the virus according to USDA tests, but that hasn't stopped Colombia becoming the first country to impose restrictions on US beef from states where dairy cattle are infected.

Despite the low public health risk, Dr. May still sees the coming months as key to maintaining faith in the industry. "From my point of view, this is one of those make-or-break moments where coordination between state/federal animal health officials, industry groups, producers and veterinarians on the ground is paramount. We can't afford a disjointed, piecemeal effort against a virus continuing to prove its ability to adapt and find new hosts."

US domestic outlook

The export market for dairy, while large in absolute terms, is minimal compared to its domestic sales. Luckily for producers, there do not appear to have been any notable impacts on supply.

The latest US Department of Agriculture (USDA) report, published on 17 April, suggests that dairy yield was down around 0.4% year-on-year in February, continuing an eight-month-long trend, and makes no mention of avian flu as a cause. Dairy prices remain stable, with decreases in wholesale milk and cheese costs and minor increases in those of butter.

The major industry association National Milk Producers Federation (NMPF) is also keen to highlight that thus far risks to public health and the supply chain remain low.

"It's important to remember what this situation is and what it isn't," Alan Bjerga, the NMPF's executive vice president of communications and industry relations, said.

"As FDA testing continues to show, this is not a consumer worry – pasteurisation is working, the milk supply is safe, and we haven't seen the type of consumer panic that can be created by misinformation and sensational media reports.

"Nor is the milk supply itself at risk – the number of farms affected is still a small fraction of the U.S. dairy herd, and the illness itself is mild in cows, with little long-term effects on milk production."

Bjerga did, however, echo Dr. May's statement on the importance of testing and monitoring. "It's incredibly important at this moment for key stakeholders to work together. That means constant communication among farmers, veterinarians and officials.

"It means continually re-evaluating the situation to take the most effective measures possible, which is the spirit of the federal order [mandating wider testing and reporting for dairy cattle] that went into effect Monday. And it means honest, clear conversations about the

exact nature of what we are facing, and the humility to know that facts on the ground change and we inevitably will need to adjust."

A WINEMAKING BYPRODUCT CAN REDUCE DAIRY CATTLE EMISSIONS

May 2, 2024
https://dairynews7x7.com/a-winemaking-byproduct-can-reduce-dairy-cattle-emissions/

California's wine industry could play a role in reducing methane emissions from dairy cattle.

Researchers at University of California, Davis, added fresh grape pomace left over from winemaking operations to alfalfa-based feed for dairy cows and found that methane emissions were reduced by 10% to 11%.

The preliminary findings could offer a low-cost sustainable pathway for vineyards to reduce waste while helping dairy operations maintain quality while cutting back on emissions of methane, which is a powerful greenhouse gas.

"This is the first time anybody has shown that this can work in California," said Ermias Kebreab, an animal science professor and associate dean of global engagement at UC Davis. "You're reducing emissions, you're improving the quality and it may also reduce the cost of production."

This is the first time anybody has shown that this can work in California. You're reducing emissions, you're improving the quality and it may also reduce the cost of production." —Ermias Kebreab

The pilot research project, which will be detailed in a paper later this year, also found that mixing in grape pomace improved feed efficiency and increased healthful fats, said Selina Wang, an associate professor of Cooperative Extension in small scale fruit and vegetable processing.

"We found that the feed with the additive of grape pomace changed the fatty acid composition of the milk and, in particular, increased the polyunsaturated fats, which are the main fats in grape pomace," Wang said. "This suggests that supplementing the feed with an optimal fatty acid profile may have positive impact on the fatty acid profile of the milk and increase their health benefits."

Symbiotic commodities?

In 2022, California was the leading dairy producer in the country, generating $10.40 billion in sales, while 90% of wine production came

from the Golden State, with a market value of $5.54 billion.

Processing grapes for wine generates thousands of tons of waste in the form of grape pomace, which consists of leftover seeds, skins and stems. Dairy and livestock are responsible for more than half of the state's methane emissions, owed largely to cow burps.

They are the top two agricultural commodities in California, according to state production statistics, and reducing waste and emissions for both industries are key to the state meeting its climate goals.

Wet, dry and dry and ground (left to right) grape pomace. (Edwin Grey / UC Davis)

Tannins for emission reductions

Wine grapes are high in fats and tannin, which is known to reduce methane emissions, so Kebreab sought to test if adding grape pomace to feed could have a positive effect while not adversely affecting production.

"It's a byproduct that's not being used much," he said. "This is something that can be included in our efforts to try to reduce emissions."

A mix of feed options

To do the research, scientists worked with Holstein dairy cows and gave the animals feed consisting of alfalfa, wheat, almond hulls, cottonseed and grain. After two weeks, the cows were split into three groups: A control group with no change in diet, another where the feed combination included 10% grape pomace and a third that received 15% grape pomace.

Every four weeks, the cow groups would change feed combinations.

They were fed twice daily by postdoctoral students and interns, and emissions were monitored daily. Milk production was documented in the morning and evening and milk samples were collected weekly to analyze for fat, protein, lactose and other measurements, which showed no differences between the control and other groups.

Methane and hydrogen emissions were reduced compared with the control group, suggesting that grape pomace reduced enteric emissions without affecting production.

"I think the dairy industry will be very interested in this," Kebreab said. "Sometimes when you're using additives, they have palatability issues. With grape pomace, they absolutely love it."

Next on the list is a trial with olive pomace and working to understand the mechanism that reduces emissions.

"If we have a better understanding of the mechanisms, we can select the feed additive or a mix of feed additives to reduce dairy cattle emissions and make dairy milk healthier while making use of the agriculture byproducts," Wang said. "There's a lot of room to grow in this space and we're excited about this work."

The research was supported by the California Dairy Research Foundation.

The UC Davis College of Agricultural and Environmental Sciences originally published this article on April 25, 2024.

CATS DIED AFTER DRINKING RAW MILK FROM BIRD FLU-INFECTED COWS

May 2, 2024

https://dairynews7x7.com/cats-died-after-drinking-raw-milk-from-bird-flu-infected-cows/

More than half of cats around the first Texas dairy farm to test positive for bird flu this spring died after drinking raw milk from the infected cows, scientists reported this week, offering a window into a toll the virus has taken during its unprecedented spread through the cattle industry.

The report, published Tuesday in the Centers for Disease Control and Prevention's Emerging Infectious Diseases journal, chronicles the early investigation by veterinarians and academic laboratories into a disease that started spreading through cows across the region earlier this year.

Cats at the Texas farm had been fed raw milk from cows that turned out to be infected with highly pathogenic avian influenza, or HPAI H5N1. A day after the farm first started noticing cows were getting sick, the cats started getting sick too. By the end, more than half of the cats had died.

"The cats were found dead with no apparent signs of injury and were from a resident population of [approximately] 24 domestic cats that had been fed milk from sick cows," the scientists wrote.

Tests of the samples collected from the brains and lungs of dead cats yielded results suggesting "high amounts of virus." Autopsies of the cats also revealed "microscopic lesions consistent with severe systemic virus infection," they said, including to the eye and brain.

Around 1 in 5 samples of milk the Food and Drug Administration checked from U.S. retailers tested positive for H5N1, though the agency said last week that studies so far show that pasteurization is working to kill off the virus in milk; only harmless fragments remained. Officials have repeatedly urged Americans not to drink raw milk.

While the spread of the virus from cows to cats through raw milk is new, cats have long been known to scientists as one of the species especially vulnerable to severe disease from H5N1.

The U.S. Department of Agriculture has said that deaths and neurological disease in cats have been "widely reported" around farms with outbreaks of the virus.

By contrast, only a fraction of cows — up to 15% —developed signs of illness in herds with the infection, the scientists said. Officials have said that cows largely recover within a month after their infections. The virus has been devastating for poultry flocks that faced widespread deaths or had to be culled after contracting the virus from wild birds.

Previous research has linked deaths and neurological disorders in domestic cats to H5N1 infections. An earlier study published by the CDC

journal from Thailand back in 2006 suspected a cat had contracted the virus after eating an infected pigeon.

But the recent infections prompted the CDC this month to issue new guidance for veterinarians treating suspect H5N1 cases in cats, urging stepped up measures like donning respirators and goggles to avoid contracting the virus.

“While it’s unlikely that people would become infected with bird flu viruses through contact with an infected wild, stray, feral, or domestic cat, it is possible — especially if there is prolonged and unprotected exposure to the animal,” the agency said in its guidance.

Some cases in humans have also been suspected to have been caused by consumption of infected birds, like in Cambodia earlier this year.

Meanwhile, authorities have been racing to curb further spread of the virus in dairy cattle, which is believed to have been spreading from cow-to-cow since a single initial spillover from wild birds earlier this year.

“Ingestion of feed contaminated with feces from wild birds infected with HPAI virus is presumed to be the most likely initial source of infection in the dairy farms,” the scientists wrote.

The U.S. Department of Agriculture said Monday it would test ground beef sold at retailers for H5N1 and would study how cooking beef could curb potential risk posed by the virus, in the wake of an earlier order ramping up testing on dairy cattle being shipped over state lines.

It is unclear whether any ground beef samples have so far tested positive for the virus. Results “are forthcoming” and will be shared when available, the spokesperson said.

Meanwhile, over 2,000 tests have been run by the department so far this month from cattle.

“As of April 30, 34 dairy herds have been impacted by H5N1. For context, there are more than 26,000 dairy herds nationwide,” the spokesperson said in a statement.

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“As of April 30, 34 dairy herds have been impacted by H5N1. For context, there are more than 26,000 dairy herds nationwide,” the spokesperson said in a statement.

COWS WITH NON GMO A2A2 GENES AT SHARJAH DAIRY FARM

May 1, 2024

https://dairynews7x7.com/cows-with-non-gmo-a2a2-genes-at-sharjah-dairy-farm/

H.H. Dr. Sheikh Sultan bin Muhammad Al Qasimi, Supreme Council Member and Ruler of Sharjah, inaugurated the first phase of Mleiha Dairy Farm and launched its visual identity.

The event took place in the presence of H.H. Sheikh Abdullah bin Salem bin Sultan Al Qasimi, Deputy Ruler of Sharjah.

Upon his arrival, His Highness witnessed the ringing of the farm's bell by a group of children, signaling the official opening of the farm.

In his speech on this occasion, the Ruler of Sharjah emphasised the integration of productive projects in the emirate to provide healthy food for all family members. These projects include vegetable production, wheat farming, dairy farming, and poultry farming, which is set to open soon. In addition, specialised education is being provided to support these projects with qualified scientific personnel through the establishment of the University of Al Dhaid. This aims to ensure a dignified life for citizens, thereby achieving social stability and fulfilling the objectives of raising healthy children.

His Highness expressed his happiness with the success of the two projects: The vegetable production project and the wheat project in Mleiha. The wheat project started with approximately 450 hectares, and for the first time, it achieved the highest and finest protein percentage of 18 percent in the first year. In the second year, with an increase in the cultivated area to 1400 hectares, the protein percentage further rose to 19.1 percent.

The Ruler of Sharjah stated, "Today, we inaugurate the third project, for which a budget of approximately AED 600 million has been allocated, as this is a substantial budget, and what we are witnessing today is just the beginning and work is underway to complete the entire project plan."

He added, "The cows we have are purebred cattle that have not undergone any breed improvements. We have been working for two years to acquire and assemble them in a facility owned by the Government of Sharjah. These cows come from northern Germany and southern Denmark, and they are pregnant, with each cow carrying a female fetus. This is a medical and scientific process carried out under medical supervision, where the female cows are inseminated to carry each one of them with a female fetus. Currently, we have 1,200 cows, and each of them will give birth to a calf, resulting in 1,200 new cows. In the upcoming season, we will have additional numbers of cows, and so on."

His Highness emphasised that the cattle project receives complete care in all aspects, including health, environment, nutrition, and natural growth, to ensure that the milk is a complete and healthy food. Within the next three years, it will become the largest production project for clean, natural, organic milk.

Sheikh Sultan discussed the journey of fresh organic milk from the moment it is milked from the cows, where it is packaged in specialised containers that prevent light and oxygen from entering, as these factors can affect the milk. Furthermore, these containers will be recycled.

The Ruler of Sharjah discussed the fourth project, which is the poultry project by saying: " The poultry project complements the other three projects." His Highness clarified that the poultry will be from a slow-growing breed, raised through free-range farming and organic agriculture. The poultry meat and eggs produced will be natural products because they will be fed with natural food. Additionally, traditional natural remedies will be used to treat poultry in case of illness, making them beneficial and harmless to human health. This poultry will not be given any growth accelerators, hormones, or artificial substances. Furthermore, they will be raised in spacious open areas, allowing them to grow comfortably over a period of 70 day.

His Highness highlighted the harmful effects of using unhealthy substances and growth accelerators in poultry and cattle, which can disrupt human hormones, contribute to tumor growth, and increase the risk of cancer. Additionally, it can have unnatural effects on the growth of children and young individuals.

His Highness explained that these production projects are interconnected, where the by-products of each product are utilised to feed the other or enrich the soil with natural fertilisers derived from animal waste. This makes them environmentally friendly projects that preserve the environment.

In conclusion, the Ruler of Sharjah addressed parents, emphasising the importance of caring for children from an early age.

He mentioned the availability of nurseries for children from their first year, highlighting the significance of proper social upbringing for children, as well as the preservation of language, culture, heritage, and faith as these elements contribute to the well-being and future of society and the nation.

H.H. the Ruler of Sharjah toured the farm facilities, built on an area of three million and seventy-seven thousand square metres, and include purebred Holstein cows, the first of their kind in the Middle East, which produce A2A2 protein organic milk.

During the tour, His Highness viewed the farm's barns, designed with a metal structure to suit climate change. The barns, in the first phase, contain 1,200 cows carrying females. The farm is working to establish a nucleus herd consisting of 5,000 cows carrying natural, non-genetically modified A2A2 genes, over the next five years, with the completion of 63 barns.

His Highness was also briefed on the latest technologies used in monitoring cows through necklaces installed on the neck of each cow. Necklaces aim to detect cows' movement and health, and to determine when they are vaccinated, in addition to using the automatic feeding system and rubber flooring to maintain the safety of cows during the feeding period. Locking system contributes to facilitating the consumption and stabilisation of feeding during periodic checks. Automatic cleaning methods are applied through the flow of water treated in safe ways within the water treatment purification unit on the farm, in addition to the cooling system and dry fans to repel insects.

H.H. the Ruler of Sharjah listened to an explanation about the space that the farm provides for cows inside and outside the barns, which depend on organic laws and legislation. The space aims to reduce stress on the cows, in addition to the application of biosecurity measures on the farm and all its facilities, and the organic feed that the cows are fed on the farm, and its sources. The farm relies on providing this feed on several sources, starting with the centre for manufacturing balanced feed mixtures on the farm, and examining the

ingredients to ensure its quality and compliance with specifications, space will be allocated on the farm to grow organic fodder, in addition to relying on organic wheat hay and bran from the Mleiha farm.

His Highness visited the automated secondary parlour, and saw the role it plays, designated for newborn cows with a capacity of fifty points. Two main circular automatic parlours will be constructed for dairy cows, with a capacity of eighty points each. Each milking cycle takes seven minutes, which will enable three thousand cows to be milked within seven hours in one circular parlour, three times a day.

In a parental panel discussion, during the tour, with a group of children, the Ruler of Sharjah explained the importance of eating healthy food and its impact on the future of human life.

His Highness called on the children to be ambassadors to educate their peers about the necessity of adhering to healthy food and staying away from harmful food. His Highness listened to the children about the types of foods, the healthy ones and the harmful ones and the health effects they cause to the human body.

Sheikh Sultan viewed samples of environmentally friendly paper boxes and containers that will include Mleiha Dairy Farm products of fresh milk, yoghurt and labneh.

The Mleiha Dairy Farm, which is supervised by Sharjah Agriculture and Livestock Production EST. (Ektifa), is based on the model of organic production prepared using authentic methods as the first farm of its kind in the Middle East. The herd of cows was chosen because it is a natural breed characterised by extreme endurance. Its upbringing in open natural pastures contributed to making it enjoy great immunity and less exposure to health diseases, in addition to the fact that its milk contains the A2A2 protein, which is of high quality, and a higher percentage of fats and proteins, compared to other common cows. Milk contains approximately more than 4% fat, and 3.5 percent protein. It is considered one of the finest types of milk that will reach consumers in its natural form without any interference or reduction in its components. It is also characterised by ease of digestion and reduces intestinal disorders.

The Foundation works, within its various projects, to ensure sustainable food security system, and to achieve integration through the circular economy to produce organic fertiliser to preserve the environment, which contributes to increasing soil fertility providing it with the necessary and beneficial elements, which is one of the most important inputs in the wheat farm in Mleiha, which in turn supplies the Mleiha dairy farm and the poultry farm with organic feed.

This is with the aim of achieving integration between agricultural and livestock production, and achieving the principle of the circular economy, which promotes sustainable development and future economic growth. This innovative method represents the set of economic benefits of the circular model and represents a great opportunity for the Emirate of Sharjah to focus on improving resource efficiency and effectiveness, by reducing waste in the manufacturing and reuse process, and extending the life cycle of materials and products in an environmentally appropriate manner.

The opening ceremony was attended, alongside H.H. the Ruler of Sharjah, by Sheikh Mohammed bin Humaid Al Qasimi, Head of the Department of Statistics and Community Development; Sheikh Mohammed bin Abdullah bin Majid Al Qasimi, Director of the Department of Municipalities Affairs; Abdul Rahman bin Mohammed Al Owais, Minister of Health and Prevention; and Dr. Abdullah Belhaif Al Nuaimi, Chairman Sharjah Consultative Council, and a number of senior officials and notables from the region.

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