



India's Only Newspaper on Agriculture Industry & Trade having Maximum Presence in National & International Trade Events

AGRITTECH INDIA

Media Today Group Publication एग्रिटेक इंडिया Promoting Your Business Worldwide

15th Edition

AgriTech India 2024

22-23-24, August 2024
BIEC, Bangalore, India



www.agritechindia.com

50 YEARS OF A MILK REVOLUTION THAT CHANGED INDIAN COOPERATIVE ENTERPRISES FOREVER

— Maulik Pathak



Amul, celebrating 50 years, empowers 3.6M farmers in a transformative dairy legacy

Nilesh Patel, a 35-year-old farmer, stops for a moment to check his phone after selling three cans of milk at the collection centre of Bedwa Milk Producers' Co-operative Society Ltd in Bedwa village, home to around 6,700 people. He receives a text message

confirming that he sold 8.19 litres of milk with a fat content of 9.4% and earned Rs. 662.98, which was deposited into his account instantly.

"It is our third generation selling milk to the cooperative," Patel said, recollecting that he received a bonus of Rs. 75,000 last year for

selling milk to the cooperative. Patel, who lives in the village with his family of seven, tends to 14 buffaloes and manages a farm spanning about 3 bigahs (around 2 acres). He earns about Rs. 50,000 a month after deducting expenses for cattle feed.

Patel is among the 1,863 member-producers of the village dairy co-operative society, a group that includes 511 landless farmers. This society supplies milk to the district milk union, the Kaira District Co-operative Milk Producers Union headquartered in Anand, less than 15km from Bedwa village, from where Gujarat milk cooperatives started before Independence.

A Tradition of Cooperation

Patel's story is not confined to his village

...Continued on P2

INTEGRATED FARMING: A GAME CHANGER IN AUGMENTING FARMERS INCOME OF KARNATAKA

— A. N. Vijayakumar



Karnataka is witnessing a transformative shift in its farming landscape. With the implementation of the "Karnataka Raitha Samruddhi Yojane" and the establishment of the Agriculture Development Authority, the State government is paving the way for integrated farming practices. This article delves into the significance of integrated farming in augmenting farmers' income in Karnataka, highlighting key initiatives and their potential impact on the State's

agriculture sector.

Agriculture has been the backbone of Karnataka's economy, providing livelihoods to millions of farmers across the State. However, persistent challenges such as fragmented landholdings, dwindling farm incomes, and climate uncertainties have necessitated innovative approaches to revitalise the sector.

In response, the Karnataka government has embarked on a bold journey towards promoting integrated farming as a means to enhance farmer

prosperity. Integrated farming, also known as mixed farming or polyculture, involves the simultaneous cultivation of crops, rearing of livestock, and other allied activities within a single farming system. This holistic approach facilitates in optimising resource utilisation but also fosters resilience against market fluctuations and environmental stresses. This mechanism of leveraging synergies between different components of the farm ecosystem, integrated farming holds the promise of significantly augmenting farmers' income while ensuring the sustainability of agricultural operations.

Adopting integrated farming

Integrated farming can be adopted by farmers by considering the following to enhance productivity and profitability, and for sustainable agricultural practices on the farms. Integrated farming begins with a thorough assessment of farm resources, including land, water, climate, and existing farming practices. Farmers should identify their goals and priorities, whether it be increasing income, improving soil health, or diversifying production. Farmers can start small and gradually expand for experimentation and learning, minimising risks and maximising

...Continued on P4

NEW HORIZONS: DRONES TAKE FLIGHT OVER INDIAN FARMS

While there is no concrete data on the number of drones being used in the agriculture sector, according to an American consulting firm, agricultural drone usage in India will grow at 38.5% CAGR and reach a value of \$121.43 million by 2030.

— SNV Sudhir DHNS

Drones, which were most usually linked with security, war, and disaster management, are quickly gaining new ground in Indian agriculture. In India, the potential value for drone-powered solutions is highest in the infrastructure sector at \$45.2 billion according to an analysis by Pricewaterhouse Cooper. The second highest valued is the agriculture sector at \$32 billion for such interventions.

While there is no concrete data on the number of drones being used in the agriculture sector, according to an American consulting firm, agricultural drone usage in India will grow at 38.5 per cent CAGR and reach a value of \$121.43 million by 2030. The adoption rate of drones will form 2 per cent of total agriculture machinery spending, the firm predicted.

The stagnation of the prices of produce, followed by the mass exodus of labourers



from agriculture and the consequent rise in labour wages have all made such mechanisation imminent, as it was in the case of Apuri Nageswara Rao, who grows chilli on 10 acres of land in Thettelapadu village of Thirumalayapalem mandal of Khammam district.

"There were times when I was frustrated with the unavailability of manual labour. The entire crop is lost if spraying is not done at the right time. Now, I need not worry. I purchased a drone which sprays all 10 acres with

pesticides. My son and I take turns to operate it," he says.

He is able to save a substantial amount on the cost of labour. After he purchased a drone for around Rs 3 lakh, Apuri now saves Rs 1 lakh on labour charges every year. With the use of drones, an unexpected bonus has also been a drop in pesticide use. In the past, he would spend at least Rs 27,000 on chemicals every year. Now, even this expense has dropped to Rs 18,000.

Numerous forecasts predict that drones will be

...Continued on P3

INSIDE STORIES

- New Coating Better Protects Fruit and Vegetables
- Types of Millet Milk You must Consume to Boost Immunity, Wellness
- India's Basmati Rice Exports to Fall as Pakistan's Surge
- Dairy industry needs to focus on farmers along with consumers: Dr. RS Sodhi
- India Needs more Startups in Agriculture Space, Says CEO of Deshpande Startups

17th INTERNATIONAL **flora expo 2024**

25-26-27, OCTOBER 2024
Bombay Exhibition Center, NESCO, Mumbai, India

Concurrently show: **17th International Landscape & Gardening Expo 2024**

International Exhibition on Floriculture, Floral Designing, Nursery, Landscaping, Greenhouse, Products & Technologies

BOOK YOUR STALL NOW!

www.floraexpo.com

Organized by: Government of India, Ministry of Agriculture, Government of Karnataka, Government of Maharashtra, Government of Tamil Nadu, Government of West Bengal, Government of Andhra Pradesh, Government of Odisha, Government of Jharkhand, Government of Chhattisgarh, Government of Madhya Pradesh, Government of Uttar Pradesh, Government of Bihar, Government of Assam, Government of Arunachal Pradesh, Government of Manipal, Government of Mizoram, Government of Nagaland, Government of Tripura, Government of Meghalaya, Government of Sikkim, Government of Puducherry, Government of Jammu and Kashmir, Government of Ladakh, Government of Andaman and Nicobar Islands, Government of Chandernagore, Government of Diu, Government of Daman, Government of Lakshadweep.

Media Partner: **FLORACULTURE**, **FLORMARKET Global**

For stall booking and other details, please contact:
Mobile: +91 9319608806 | +91 9899380104 | WhatsApp: +91-9811152139 | E-mail: ifloramtp@gmail.com | landscapexpo@gmail.com

...Continued from P1

50 YEARS OF A MILK REVOLUTION THAT . . .

alone. He is part of a grand narrative, encompassing 3.6 million farmer-members spread across 18,600 village dairy cooperative societies in Gujarat. This expansive network collaborates under the umbrella of the Gujarat Co-operative Milk Marketing Federation (GCMMF) having 18 district cooperative milk producer unions under its banner, which is celebrating the golden jubilee of its establishment this week. GCMMF manages 30 million litres of milk daily, clocking an annual turnover of Rs. 80,000 crore in 2023-24.

The milk, including Patel's contribution, undergoes processing and emerges as various products branded Amul – India's largest FMCG brand and a global dairy powerhouse. On February 22, Prime Minister Narendra Modi along with Union home minister Amit Shah and Gujarat chief minister Bhupendra Patel will attend an event at the Narendra Modi Stadium in Ahmedabad where about 125,000 milk producers from the state will gather to celebrate 50 years of GCMMF. "Amul" is derived from the Sanskrit word "amulya" which means "priceless".

"Throughout my career, I can't recall a single day when milk supply was halted. Even during the challenges of Covid, we maintained social distancing and took precautions, ensuring uninterrupted delivery. It was crucial. Without it, children would go hungry. Thankfully, our village remained untouched by the virus. Despite my children settling abroad, I chose to stay here, part of this vital community service, driving positive change where it's needed most," says Dinesh Patel, secretary of Bedwa Milk Producers' Co-operative Society, with over 23 years of service.

Revolutionising Dairy: The Amul Legacy

The birth of the Amul model of rural cooperatives dates to 1946 when milk became a symbol of protest. Farmers in Kaira district faced exploitation in the milk marketing system while contractors profited at the expense of producers, who were forced to sell at low prices. The situation worsened with the Bombay Milk Scheme in 1945 entering into an agreement with Polson Dairy, which further marginalised the farmers.

Responding to these grievances, Sardar Patel advocated for the formation of cooperative societies to empower farmers in marketing their milk. Encouraged by his advice, the farmers organised themselves and embarked on a historic milk strike in January 1946. Led by Morarji Desai, they demanded the establishment of cooperative societies in each village to collect milk directly, bypassing contractors.

"At this stage the milk commissioner – an

Englishman – and his deputy, a famous dairyman of India, Dara Khurody (who later built Bombay's Aarey Milk Colony), decided to visit Anand. They saw that the farmers were adamant, their spirit very strong and that their strike was unlikely to end. Khurody advised the commissioner to concede to their demands.

"Look at their leader Tribhuvandas Patel," he said.

"He wears a Gandhi topi, he cannot speak English. How is he going to handle the milk business? This is not New Zealand or Denmark. This is India. Milk business is a technical thing. Do you really think the cooperatives in Anand can succeed? Concede to their demands; they are only doomed to failure," Khurody added, according to the autobiography of Verghese Kurien, founder of GCMMF and often hailed as the brain behind the development and success of Amul.

The British accepted the demand and Patel organised villagers to set up Kaira District Cooperative Milk Producers Union Ltd in 1946, the first milk cooperative in Gujarat. The Union began pasteurising milk in June 1948, for the Bombay Milk Scheme – just a handful of farmers in two village cooperative societies producing about 250 litres a day.

In 1965, during a visit to Anand, then prime minister Lal Bahadur Shastri was deeply impressed by Amul's success. Spending a night with Kaira's farmers, he saw firsthand the impact of their cooperative efforts. This encounter fuelled Shastri's determination to replicate the Amul model nationwide.

He entrusted Kurien, then the general manager of Amul, with this task. This set the stage for the establishment of the National Dairy Development Board (NDDB) and the launch of Operation Flood or the White Revolution, marking the beginning of a transformative era in India's dairy sector.

As milk cooperatives expanded in Gujarat with several districts adopting the Kaira model, the Gujarat government in 1973 decided to form the Gujarat Cooperative Milk Marketing Federation Ltd with an aim to push Amul as Gujarat's milk brand nationally and internationally.

Amul is a three-tier structure with the dairy cooperative societies at the village level federated under a milk union at the district level and a federation of member unions at the state level. A significant feature of the movement Kurien led is that milk is purchased largely from women, empowering them economically and socially. Mehta said GCMMF passes on 80-85% of each consumer rupee back to milk producer-members, thus encouraging them to produce more.

"The leadership at GCMMF navigated the change process by exploring various models, including the American approach, before ultimately embracing Japan's

total quality management (TQM) philosophy. Unlike the American model, which may involve significant organisational restructuring, Japan's TQM focuses on leveraging participative processes while preserving the fundamental DNA of the organisation," said Jayen Mehta, MD of GCMMF.

In his memoirs, Kurien highlighted how western interests sought to perpetuate the belief that converting buffalo milk into powder was impossible, aiming to maintain their dominance in the milk powder market. However, with the expertise of his friend HM Dalaya, a skilled dairy engineer, GCMMF successfully transformed buffalo milk into powder, condensed milk, and later, cheese, enabling India to compete against global giants such as Nestle. This breakthrough not only addressed the challenge of milk wastage during flush seasons but also bolstered India's self-sufficiency in dairy production.

GCMMF has 18 board members who represent milk unions in the state. Each district dairy union chief, who is also a board member, gets one regular vote and extra votes based on their dairy's business with the federation. Over time, there has been a

shift in board affiliation from the Congress to Bharatiya Janata Party (BJP), and now all district dairy union chiefs are affiliated with the BJP. Currently, Shamal Patel, chairman of the Sabarkantha District Cooperative Milk Producers Union Ltd (Sabar dairy), serves as chairman of the GCMMF.

The federation runs 98 dairy plants located across India with a daily milk handling capacity of 50 million litres equipped with modern facilities to process, pack and store the milk and milk products. Besides Amul, GCMMF also markets some of its products under the brand name of Sagar.

The Next Frontier

Union finance minister Nirmala Sitharaman in her interim budget speech earlier this month said that despite becoming the world's largest producer of milk, India continues to struggle with low productivity of milch animals.

"A comprehensive programme for supporting dairy farmers will be formulated. Efforts are already on to control foot and mouth disease. India is the world's largest milk producer but with low productivity of milch animals. The programme will be built on the success of existing schemes

such as Rashtriya Gokul Mission, National Livestock Mission, and Infrastructure Development Funds for dairy processing and animal husbandry."

On its part, the GCMMF is investing in new product categories, including organic foods, high protein products, a probiotic range and fresh sweets.

"Currently, we're making cheese from milk and discarding the protein. But there will come a time when people discard the cheese and opt solely for the protein. We have explored innovative technology to extract whey from milk without the need for powder. Today, with protein is in high demand, we are proud to offer it at an unmatched price point. For example, our 250ml buttermilk provides 15 grams of whey protein at just Rs. 25. Additionally, we're preparing to launch high-protein milk containing 30 grams of protein in 200ml," said Mehta.

Targeting a turnover of Rs. 1 lakh crore in the next two years, Mehta said the GCMMF aims to transform from a dairy to a food products organisation.

GCMMF has inspired diverse cooperatives, including ventures like the Charotar Gas Sahakari Mandali, which aims to replace

wood with piped natural gas in villages. Modelled after Amul's successful cooperative model, Charotar Gas is the sole cooperative in the city gas distribution (CGD) business, providing gas supply even to Amul's factory in Anand and around two dozen villages.

"The Charotar Gas Co-operative, inspired by the successful Amul co-operative model, was established to provide women with affordable and clean cooking fuel. Initially, gas was supplied through pipelines from Dholka, where a producing well was located. Today, our household gas remains 25-30% cheaper than LPG cylinders, and we provide a 15% dividend to stakeholders. Adapting to modern trends, we are transitioning to hydrogen blending and exploring the establishment of EV charging stations at our CNG fuel stations," said Dharmendra Patel, chairman of Charotar Gas.

In all this, what may not change in Amul though is its timeless advertising campaign, featuring a girl in a polka-dot skirt with witty one-liners created by the legendary Sylvester daCunha. ■

Source: www.hindustantimes.com

14th EDITION
grainTech
 INDIA 2024

22-23-24, August 2024
 BIEC, Bangalore, India

INDIA'S LARGEST TECHNOLOGY EXHIBITION FOR
 FLOUR, RICE, PULSES, SPICE, CORN, MILLET,
 SEMOLINA, PASTA, BISCUIT, FEED, MILLING
 MACHINERY, STORAGE, PROCESSING, PACKAGING,
 INGREDIENTS AND ALLIED INDUSTRIES

BOOK YOUR STALL NOW!

HIGHLIGHTS

- 350+ STALLS
- LIVE MACHINERY DEMONSTRATION
- 20+ COUNTRIES
- CONFERENCE/ WORKSHOP
- 25000+ VISITORS
- WORLD'S TOP MOST COMPANIES PARTICIPATION

Concurrent Shows:

India **FOOD EX** 10th Edition 2024
BakeryTech India 2024

Organizer: **media today group**

*Supported by: **National Federation of India**, **K.V.V.V. Karnataka State Rice Millers Association**, **Food Processing & Packaging Machinery Industry Association, India**

Strategic Partner: **IDMA**

Industry Partners: **TANBA** (Tamil Nadu Bakers Association), **KARUKUDI** (Kerala Bakery Owners Association)

Official Magazine: **AgriBusiness & FOOD INDUSTRY**

Media Partners: **ANS** (All India News Service), **UDYOGPREPARNA** (All India Udyog Preparna)

International Media Partners: **MILLER**, **Dejimeni**, **WORLD-GRAIN**

For stall booking and other details, please contact:
 Phone: +91-11-49854161 | Mobile: 9899380104 | 9319608806 | E-mail: graintechindia@gmail.com | Web.: www.graintechindia.com

...Continued from P1

NEW HORIZONS: DRONES TAKE FLIGHT . . .



the future of agriculture. Recognising this, in 2022 Prime Minister Narendra Modi stated that having a drone on every field would be a game changer for the agriculture economy. Since then the government has been encouraging 'Kisan Drones'.

The advent of new technology into agriculture has begun, but what will this transformation mean for the 144.3 million labourers in the sector, or the environment and economy? These are some questions that loom large.

One such concern with drone usage has been about the aerial spraying of harmful pesticides.

Nandini Jayaram, a Karnataka Rajya Raitha Sangha leader, says by increasing the use of modern technology, the state may face adverse effects.

"The use of drones to spray chemicals will result in contamination of soil and water. Today, we may find it as a solution but in the future, it is bound to harm humans," she says. There must also be a focus on the irreversible damage to soil and water.

Known as pesticide drift, experts fear that drone-based application of chemicals for farming could spread to non-target areas, contaminating water bodies, soil and even human settlements nearby.

"Due to aerial spraying of chemicals, there is a higher chance of the chemical being spread to a larger area," says Kavitha Kuruganti, the convener of Alliance for Sustainable & Holistic Agriculture (ASHA).

Scientific studies in the USA found that spray drones produce a significant amount of pesticide drift. Employing swathe offsets and specialised nozzles can cut this spread.

"The flying and spraying parameters of drones significantly influence droplet deposition and spray drift," says T Kiran Babu of Prof Jayashankar Telangana State Agricultural University (PJTSAU).

Babu is part of a team from the state's agriculture varsity that had developed standard operating procedures (SoPs) for drone-based pesticide applications in rice. PJTSAU also established a drone academy to train aspiring pilots and to conduct research on drones in farming.

Spray height, volume,

drone flight speed, droplet parameters, application rate and spray solution properties are all important parameters that are to be taken into consideration while taking up aerial spraying using drones.

Following the SoPs is par paramount as in such cases there is negligible environmental effect. "These SoPs are important," added Kiran Babu.

However, it is unclear how many users keep these guidelines in mind and who regulates or monitors them. "Who is going to monitor if SoPs are strictly followed or not? Currently, there is no such mechanism. Governments should also look into this very important aspect," a farmers association leader told DH.

While there have been multiple applications of drones in agriculture that include water, plant health soil assessments and field mapping, currently their use is mostly to spray pesticides. In fact, according to a report by the American consulting firm, spraying operations have more than 50 per cent of the total market share.

"It is difficult to find a skilled workforce to spray pesticides. Not many are keen due to the health hazards associated with it. It is here that drones can be employed and where farmers can reap maximum benefit," says Prem Kumar Vislawath, CEO of a drone tech start up.

His company designs and manufactures small and medium-category agricultural drones. Vislawath says that there is high demand from Maharashtra, Uttar Pradesh, Madhya Pradesh, Kerala, and Haryana. In these states, governments have adopted agriculture drone-specific policies that help farmers access bank loans to purchase drones.

Impact assessment

Some scientists say that using drones is beneficial for agriculture labourers who have extended contact with such chemicals. "Spraying pesticides is a tedious and hazardous job. Getting labourers to spray fertilisers has an impact on them too. Drones are the solution as they reduce the cost, time and risk to humans," says a scientist with the University of Agricultural Sciences Bangalore.

He says while a labourer

takes nearly two days to spray one acre of land, drones can spray two-and-a-half acres in just 12 to 15 minutes.

Currently, the Karnataka government has permitted the spraying of chemicals using drones only on 10 crops.

Various agriculture universities are conducting studies on the impact of drones on soil and water. "So far, the results have been encouraging. We need to collect data for one more year before coming to any conclusion on this," the scientist says.

The problems have been framed incorrectly according to Kavitha. "The question is not about preventing farm labourers coming in contact with harmful chemicals while spraying pesticide, our efforts should be to minimise the use of chemicals itself in the sector," she says.

Labour loss

In the present form of spraying chemicals, two labourers are employed over a week. With the advent of drones, only one drone pilot can complete the task.

Such mechanisation has led to employment loss fears among agricultural labourers, says Kalaburagi-based economist Sangeetha Kattimani. "There is a fear among the farm labourers that the use of drones can snatch their jobs and could lead to greater distress among the

peasants," she says.

On the other hand, there is also a pool of skilled youths who have found new opportunities. "There is a trend of youth coming back to agriculture as smart technology has helped them make a better living. Drone pilots are making a decent living by operating the machinery on a rental basis," she says.

In Telangana, Rathod Satish of Narayankhed is one such trained drone pilot. He charges about Rs 500 per hour to operate a spray drone which he purchased a few years ago under the Centre's Agri Infrastructure Fund (AIF) scheme.

"Sometimes, I work at least eight hours a day, still I cannot take the load of requests. Now, I do not have to go to cities to eke out my living," says Satish. After finishing his graduation, Satish underwent training at J TSAU's drone academy.

Technical expertise

Even with such training programmes and new opportunities, a lack of technical expertise hinders the uptake of drones in farming. For instance, in Tamil Nadu, the response to the usage of drones in agriculture has been mixed. While farmers in the fertile Cauvery Delta region, the rice bowl of the state, are slowly adapting to the latest technology to overcome

perennial labour shortage, their counterparts in other parts of the state are yet to embrace drones for spraying nutrients, pesticides and fungicides.

"In the next three to five years, I believe no farmer can do agriculture without the use of drones," 'Cauvery' S Dhanapalan, general secretary of the Cauvery Farmers Protection Association, tells DH.

While the government provides loans to farmers for buying drones, not many are interested in procuring one.

"We do not have the expertise to operate the equipment. Since a lot of private companies offer the service, we prefer to rent the drones rather than buy them," says Mohan, a farmer from Nagapattinam in Tamil Nadu.

Expenses

Arivu, a farmer from Budalur in Thanjavur, says he has yet to purchase the equipment because of the expenses involved. "I cultivate on 10 acres but I am still apprehensive because I feel this might add additional expenses. The companies which offer drone services should reduce the rates so that more farmers can use it," he adds.

In Kerala, drones are yet to gain popularity and traction in agriculture. Even as farmers admit that it is a

cost-effective and time-saving alternative, they highlight the lack of awareness and support through subsidies to purchase drones.

Long way to go

"What is ailing the penetration of drones in farming is the lack of awareness among farmers. A lack of proper coordination between the Centre and states on policy issues has also led to slow adoption. For instance, agriculture is a state subject, and the state governments should encourage the schemes announced by the Centre like Rs 10 lakh unsecured loans from the Agri Infrastructure Fund at minimal interest rates," Vislawath says.

Policy considerations around monitoring pesticide use and drone parameters are also of utmost importance. Modernisation of technology and advancement of machines in the farming sector compounded by disparity in payment of wages in white and blue-collar jobs are all factors pushing farmers and labourers out of the agricultural sector, Nandini Jayaram says. The advent of modern technology is only a stop-gap measure and there is a need to address persisting issues as well, she adds.

Source: www.deccanherald.com

13th Edition

DairyTech India 2024

INTERNATIONAL EXHIBITION ON DAIRY PRODUCTS, PROCESSING & PACKAGING MACHINERY, EQUIPMENT, COLD-CHAIN AND ALLIED INDUSTRIES

22-23-24 August 2024
BIEC, Bangalore, India

Concurrent Shows:

POULTRY & Livestock Expo 2024 (12th Edition)
Agri Tech India 2024 (13th Edition)

BOOK YOUR STALL NOW!

Organizer:

Supported by:

Official Publications:

International Media Partners*:

Media Partners:

For stall booking and other details, please contact:
 Mobile: +91-9315131406 | +91-9319608806 | Phone: 011-46081634 | E-mail : dairytechindiamtpl@gmail.com | Web.: www.dairytechindia.in

...Continued from P1

INTEGRATED FARMING: A GAME CHANGER IN...

benefits. Integrated farming encompasses a range of components that can be tailored to suit the needs and resources of individual farms.

Crop-livestock integration involves combining crop production with animal husbandry, where livestock contribute to nutrient cycling, weed control, and soil fertility. Agro-forestry integrates trees with crops and/or livestock, offering additional benefits such as shade, windbreaks, and biodiversity conservation. Aquaponics systems merge aquaculture with hydroponic crop production, utilising fish waste to fertilise plants and vice versa. Each component of integrated farming offers unique opportunities for synergy and resource optimisation. Education and training play a pivotal role in supporting farmers' adoption of integrated farming practices.

Farmers should participate at workshops, training programs, and extension services to enhance their knowledge and skills in integrated farming techniques. Experimentation and adaptation are key as farmers implement integrated farming systems on their farms. Monitoring and evaluation enable farmers to assess the performance and impact of their integrated farming practices, identifying

what works best and making necessary adjustments. Farmers should also explore market opportunities for their products through direct marketing channels like farmers' markets, farmers producers' companies and online platforms. Adopting to organic farming practices and promoting biodiversity enhances the sustainability of integrated farming systems, reducing reliance on chemical, synthetic inputs and fostering ecosystem resilience.

Way forward to farmers

The government's proposal of Karnataka Raitha Samruddhi Yojane should provide financial incentives, technical assistance, and market linkages to farmers in adopting diversified and sustainable agricultural practices to enhance farm productivity and income. The Agriculture Development Authority should facilitate the effective implementation of policies related to agriculture and allied activities. The authority should coordinate and collaborate across various departments of the government streamlining efforts towards promoting integrated farming and enhancing farmer welfare in the State.

The proposed establishment of an international floriculture market in Bengaluru

under a Public-Private Partnership model is poised to revolutionise the horticulture sector. The initiative of providing access to global markets and value-added services would create new opportunities for floriculture farmers to increase their income and also facilitate employment creation. The setting up of Kissan Malls in selected districts shall serve as one-stop destinations for farmers, offering technical guidance, market connectivity, farming implements, and agro-products. These integrated platforms not only facilitate knowledge sharing and capacity building but also strengthen market linkages, thereby empowering farmers to optimise their income potential.

The establishment of food parks at airports across the State would enhance the value chain infrastructure for agricultural produce. Utilising air connectivity and modern logistics facilities, these parks shall facilitate the export of high-value agricultural products, and processed foods, opening up new avenues for farmers to tap into global markets and command premium prices for their produce.

In addition, the government's proposal for the construction of new buildings for 200 veterinary institutions addresses the critical need to upgrade infrastructure and services in the animal husbandry sector. Easy access to veterinary care in the State and extension services to the farming community

would improve livestock productivity and contribute to farmers' income augmentation and also support integrated farming in the true sense. These concerted efforts of the Karnataka government towards promoting integrated farming are poised to be a game changer for the State's agriculture sector. Incentivising diversification, fostering innovation, and strengthening market linkages, have the potential to unlock new income streams for farmers, enhance productivity, and ensure the sustainability of agricultural livelihoods.

Holds promise

Integrated farming holds immense promise as a catalyst for transforming Karnataka's agriculture sector. With the State's visionary policies, strategic investments, and concerted efforts towards promoting diversification and sustainability, the government is laying the foundation for a brighter and more prosperous future for farmers. As Karnataka embarks on this journey towards integrated farming, it is poised to emerge as a pioneer in agricultural innovation and farmer empowerment, setting a benchmark for other States to follow.

The author is Professor, Indian Institute of Plantation Management. The views expressed by the author are personal and do not necessarily reflect the views or opinions of the institution.

Source:
www.thehindubusinessline.com



NEW COATING BETTER PROTECTS FRUIT AND VEGETABLES

Researchers combine food-grade wax with essential oils to defend produce from bacteria.

Dr. Mustafa Akbulut, professor of chemical engineering, has teamed up with horticultural science professor Luis Cisneros-Zevallos to engineer longer-lasting, bacteria-free produce.

According to Akbulut's recent publication in Current Research in Food Science, the global fruit and vegetable market loses over 50% of agricultural fruit production during various stages of produce handling and post-harvest treatments.

Many fruits and vegetables already have a layer of food-grade wax that is applied for cosmetic reasons and to prevent water loss. Akbulut's research combines such wax with nano-encapsulated cinnamom-bark essential oil in protein carriers to enhance them with antibacterial properties.

"We are living in an age where technology has advanced so much," Akbulut said. "However, the food industry has not competed with these advances, and there are continuous problems with food safety. News about foodborne diseases and outbreaks reporting hundreds of people becoming sick from unhygienic food frequently appears at the national level."

Akbulut's wax coating technology bolsters the safety of fresh produce and provides enhanced protection against bacteria and fungi. This composite coating provides both immediate and delayed antibacterial effects, according to the article. This is one of those tools that we are developing that could actually help the industry face these challenges against human pathogens and spoilage organisms. Foodborne pathogens are especially problematic for fruits and vegetables that are consumed raw or minimally processed due to the lack of high temperatures that can inactivate them.

Development of this coating gives better understanding of the interactions between the wax and undesired

microorganisms, Cisneros-Zevallos said.

"I think that the impact that these wax coatings will have on the industry is very big because the industry is looking for new technologies," Cisneros-Zevallos said. "This is one of those tools that we are developing that could actually help the industry face these challenges against human pathogens and spoilage organisms."

Nano-encapsulated essential oil makes it harder for bacteria to attach and survive on fruits or vegetables. The delayed release of the essential oil increases the half-life of active ingredients and produce compared to its unencapsulated counterparts, according to the article.

"When bacteria are exposed to essential oil it can break down the bacterial wall," Akbulut said. "This technology is going to basically help us inactivate the bacteria and fungi to extend the shelf life."

This technology is going to basically help us inactivate the bacteria and fungi to extend the shelf life.

Doctoral student Yashwanth Arcot ran experiments to support the research.

"This coating was also inhibiting the fungal attachment," Arcot said. "We have tested this system against Aspergillus, a fungus responsible for the spoilage of food commodities and the onset of lung infections in humans. We were successful in preventing its growth on the hybrid coatings."

Arcot said this is the first development of hybrid technologies for killing bacteria and fungus using nano-encapsulated essential oil in food waxes.

The chemicals used to produce this hybrid wax are antibacterial agents that are FDA-approved.

"These hybrid wax coatings are easily scalable and can be implemented in food processing industries," Arcot said.

Source:
www.technologynetworks.com

NATIONAL EXHIBITION ON
ANIMAL HUSBANDRY, VETERINARY, FEED, EQUIPMENT & TECHNOLOGY

12th EDITION
PULTRY
& Livestock Expo 2024

Date: 22-23-24 August 2024
Venue: BIEC, Bangalore, India

Concurrent Show:
13th Edition
DairyTech India 2024

BOOK YOUR STALL NOW!

Organiser: **Media Today Group** | Knowledge Partner*: **KPFBA** | Industry Partner: **VETS IN POULTRY** | Official Publications: **AgriBusiness & FOOD INDUSTRY** | **AGRITECH INDIA** | **HIND POULTRY** | Media Partners*: **AgriBusiness & FOOD INDUSTRY** | **AGRITECH INDIA** | **HIND POULTRY** | **AgriBusiness & FOOD INDUSTRY**

For Stall booking and other details, please contact:
Phone: 011- 46081634, Mobile : +91-9315131406 | 9899380104 | E-mail : IPLExpo@gmail.com, Web.: www.IPLExpo.com

Release Your Company Advertisements in



Please contact:

E-mail: mediatoday2@gmail.com
Phone: 91-8810216208/ 011-46081634



TYPES OF MILLET MILK YOU MUST CONSUME TO BOOST IMMUNITY, WELLNESS

— Parmita Uniyal

If you aren't exactly a fan of millet rotis or porridge, you can try millet milk instead. Rich in micronutrients and antioxidants, it can boost overall health.

Millets, the ancient superfoods, have made a powerful comeback in modern times with health-conscious people including them in their diet in a variety of ways. Apart from roti, paratha and porridge, millets can also be made snack-friendly with several recipes of cookies, fritters, and other sweet and savoury munchies. (Also read | Superfood in news: 7 millets that were all the rage in 2023)

Millet milk is another way to consume these versatile grains that are rich in protein, dietary fibre, calcium, iron, potassium, phosphorus, zinc, magnesium - an amazing variety of nutrients that can nourish your body.

Millets are no doubt among the healthiest foods in the world and are also vegan-friendly. While millet milk cannot exactly replace for your regular milk, it can be beneficial for vegans who can either consume it directly or use it in recipes like ice creams, cakes and other such desserts.

Eating millets can improve immunity and bone health considering it's rich in iron and calcium. It also contains phytonutrients which acts as antioxidants. Millets are a storehouse of fibre which can improve digestion and boost gut health. No wonder, many people are using them as substitute to wheat and rice.

What is millet milk?

Millet milk can be made with a variety of millets like ragi, proso, pearl, and sorghum. They are soaked for a few hours, ground, and desired flavourings and water are added to them. Afterwards, the mix is strained to derive millet milk.

"Millet milk, derived from various types of millet grains, offers a nutritious alternative to dairy milk, packed with essential vitamins, minerals, and antioxidants. Incorporating different kinds of millet milk into your diet can significantly enhance overall wellness," says Dr Rohini Patil, MBBS & Nutritionist.

Types of millet milks

Here are five varieties of millet milk you should consider adding to your daily routine, along with their respective benefits as per Dr Patil.

1. Ragi milk

Ragi milk is rich in calcium, making it excellent

for promoting bone health and preventing osteoporosis. It also contains high levels of antioxidants and essential amino acids, which support immune function and protect against oxidative stress. Ragi milk is particularly beneficial for individuals looking to boost their calcium intake and strengthen their immune system.

2. Proso millet milk

Proso millet milk is a good source of B-vitamins, including niacin and thiamine, which are essential for energy production and nerve function. It also contains significant amounts of magnesium, supporting muscle and nerve health. Proso millet milk can help maintain energy levels and promote overall vitality.

3. Pearl millet milk

Pearl millet milk is high in protein, making it an excellent choice for supporting muscle growth and repair. It also provides iron, which is essential for red blood cell production and preventing anaemia. Pearl millet milk is a nutritious option for individuals looking to increase their protein intake and support healthy blood circulation.

4. Sorghum millet milk

Sorghum (jowar) millet milk is rich in antioxidants, such as flavonoids and phenolic compounds, which have anti-inflammatory and heart-protective properties. It is also gluten-free, making it suitable for individuals with gluten sensitivities. Sorghum millet milk can promote heart health and reduce inflammation in the body.

5. Barnyard millet milk

Barnyard millet milk is a good source of fibre, promoting digestive health and preventing constipation. It also provides zinc, supporting immune function and wound healing. Barnyard millet milk is beneficial for individuals looking to maintain a healthy digestive system and strengthen their immune system.

Benefits of millet milk

Incorporating a variety of millet milks into your diet can offer numerous health benefits, including improved bone health, immune function, and digestive health. Whether you're looking to boost your protein intake, support heart health, or maintain energy levels, millet milk provides a nutritious and versatile option for overall wellness. ■

Source: www.hindustantimes.com

RECORD WHEAT OUTPUT SEEN AS RABI HARVEST STARTS

Amid concerns over wheat stocks plummeting to a seven-year-low, the government expects the current rabi crop to be robust, while harvesting of winter crops - chana and mustard - have already commenced in several states. Traders and officials said that prices of chana, a vital pulses variety, are expected to rule above minimum support price (MSP) because of lower sown area in the current season. Farmers fear that mustard prices are expected to rule below MSP because of cheaper imports of edible oils.

Food Secretary Sanjeev Chopra has said that there has not been any premature warming up of weather so far. "If the weather continues to remain so for the next 10-15 days we can expect a bumper harvest of wheat," Chopra stated.

The harvesting of wheat would commence in Madhya Pradesh, Gujarat and Maharashtra in the next couple of days while arrivals of crops in mandis would begin end of next month in Punjab, Haryana and Rajasthan.

The government has set a higher wheat production target of a record 114 million tonne (MT) for the 2023-24 crop

year (July-June) against an estimated output of 110.5 MT in 2022-23.

Meanwhile, Gyanendra Singh, director, Indian Institute of wheat and barley research, an institute based in Karnal, Haryana, told FE that there have been no reports of yellow rust disease in crops and conducive weather conditions so far, the standing wheat crops at present looks 'promising'.

A bumper harvest of wheat this season would give a boost to the government's procurement drive as well as stocks which have declined to seven years low at 10.62 MT at present from buffer.

Farmers fear that due to an expectation of a bumper output and higher imports, the mustard seed prices would be ruling below the MSP of Rs 5650/quintal announced for the 2024-25 season. Traders said that the harvesting of early sown varieties has commenced and the arrivals are likely to peak by the middle of next month.

Roop Singh, CEO, Uttan Mustard Producers Company, a FPO based in Bharatpur district of



Rajasthan, the hub of oilseed trade said that while in 2020 and 2021 the farmers have received remunerative prices which was reasonably more than MSP, last year the mandi prices were around the MSP of Rs 5450/quintal (2022-23 season) because of sharp increase in imports of edible oil.

"Mustard output is likely to be record this year, but we are apprehensive that mandi prices would fall below MSP this year as well," Singh said.

The agriculture ministry has estimated mustard seed production at 12.64 MT in the 2022-23 crop year (July-June).

The country imports about 58% of the total annual edible oil consumption of around 24 to 25 MT. Share of domestic edible oil includes mustard (40%), soyabean (24%) and groundnut (7%) and others.

India's import of edible oils - palm, soybean and sunflower - rose 17% on year

to a record 16.47 MT in the 2022-23 oil year (November-October), helped by lower import tariffs of only 5.5% on crude oil imports.

The harvesting of chana, which had 47% share in the country's record pulses output of 26.05 MT in 2022-23 crop years, has commenced in Maharashtra and Karnataka.

Traders said the prices are likely rule above the MSP of Rs 5440/quintal for the 2024-24 season as sowing this season has been 16 million hectare (mh), against 16.61 mh in the previous season (2022-23).

As per the agriculture ministry, the wheat sowing this season (2023-224) was at a record 34 million hectare (mh) against 33.75 mh reported during the same period previous season.

Similarly, area under chana this season 16 mh, against 16.61 mh in the previous season (2022-23). Mustard, a key oilseed, has been sown in a record 10.04 mh compared to 9.79 mh in the previous season. ■

Source: www.financialexpress.com

15th edition

India FOOD 2024 DEX

.....the largest Food Business show

International Exhibition on Food, Beverage & Bakery Products,
Food Processing, Packaging Machinery & Equipment,
Cold-chain and Allied Industries

22-23-24, August 2024
BIEC, Bangalore, India

HIGHLIGHTS:

- 350+ STALLS
- 20+ COUNTRIES
- 25000+ VISITORS
- LIVE MACHINERY DEMONSTRATION
- CONFERENCE / WORKSHOPS
- INDIA'S TOP MOST COMPANIES PARTICIPATION

BOOK YOUR STALL NOW!

Concurrent Shows:

14th Edition **GrainTech India 2024** | 13th Edition **DairyTech India 2024** | **BakeryTech India 2024**

Organizer: **Media Today Group** | In Association with: **Food Processing & Packaging Machinery Industry Association (FPIA)** | Official Publications: **AgriBusiness & FOOD INDUSTRY** | **AGRITECH INDIA** | Industry Partners: **TANBA** (Tamil Nadu Bakers Association), **KARAKULI** (Karnataka Bakery Owners Association), **FoodTechBiz** | Online Media Partner: **FoodTechBiz**

Media Partners: **Asia Media Food Package**, **UDYOGPRERANA** (Uttarakhand Government), **99 FOOD PROCESSING WORLD**, **FOOD & DRINK INDUSTRY**, **FOOD & DRINK INDUSTRY**, **FOOD INFOTECH**, **KFS**

For stall booking and other details, please contact:
Phone: 011-49854161 | Mobile: +91-9899380104 | WhatsApp: +91-9811152139 | E-mail: indiafooddex@gmail.com | Web: www.indiafooddex.com

INDIA'S POULTRY EXPORTS SET FOR A NEW RECORD THIS FISCAL

Exports of poultry products such as eggs and egg products, which crossed the Rs. 1,000 crore mark in the first nine months, are set to scale to hit a new record of Rs. 1,200 crore to Rs. 1,400 crore in the current financial year 2023-24 on strong demand from countries such as Oman and Sri Lanka among others.

India's poultry exports had touched a high of Rs. 1,081 crore (\$134.04 million) during 2022-23, doubling over the previous year's Rs. 529.8 crore (\$71 million) on rising demand for eggs and egg products among others. In the first nine months of the current fiscal, the poultry exports stood at Rs. 1,074 crore (\$134.02 million).

Shipment volumes till end of December stood at 8.56 lakh tonnes over previous financial year's 6.64 lakh tonnes.

Exports of eggs to Sri Lanka have witnessed more than a 100 fold increase in value terms in the first nine months with the neighbouring nation emerging as the second largest buyer of Indian poultry products. Value of poultry products exported to Sri Lanka stood at Rs. 117.19 crore till December end in the current fiscal as compared to Rs. 98 lakh during 2022-23. In volume terms, the shipments to Sri Lanka stood at 1.69 lakh tonnes till December end in current fiscal over previous year's 1,416 tonnes.

Exports to Oman, the largest buyer of Indian poultry products stood at Rs. 293.90 crore in the current fiscal till December as compared to Rs. 277 crore in 2022-23. Other countries that saw an increase in poultry shipments till end-December include Japan at Rs.



82.91 crore (Rs. 57.77 crore in 2022-23) and Qatar at Rs. 63.38 crore (Rs. 51.60 crore) among others.

Valsan Parameswaran, Secretary, All India Poultry Exporters Association, said robust demand from countries such as Sri Lanka and Oman among others is driving the exports. "We expect the overall exports this year to be between Rs. 1,200 crore to Rs. 1,400 crore," Parameswaran said.

Besides robust demand, the growing quality awareness among the farmers and the trade is also contributing to the growing trend, Parameswaran said, while stressing upon the need for creating additional infrastructure such as a dedicated quality laboratory in the main producing region of Namakkal in Tamil Nadu.

Mahesh P S, Joint Commissioner and Director, Centre of Excellence for Animal Husbandary, Bengaluru, said going forward, the poultry exports will increase both in chicken meat and eggs.

"The focus on quality poultry products at competitive prices will increase the pie. New states joining the bandwagon of South India's poultry hub are West Bengal,

Odisha, Chhattisgarh, Punjab etc. India being driven by primary choice in the global arena in this millennium, finds partners for poultry too and next year's target may be Rs. 2,000 crore," Mahesh said.

Parameswaran said the Indian exporters are also witnessing demand from African countries, but transportation and realisations were an issue. Also there is a rare opportunity from Russia that's likely to open up for the Indian products, he said.

Indian poultry exports, which stood at Rs. 768 crore (\$117.42 million) in 2015-16 had subsequently touched a six year low of Rs. 435 crore (\$58.70 million) during 2020-21 only to rebound in the past three years.

Source: www.thehindubusinessline.com

PROSPECTS FOR DEMAND AND SUPPLY OF AGRICULTURAL COMMODITIES TOWARDS 2030

Demand and supply projections are crucial for formulating farsighted agricultural and food policies to sustain food production, ensure food security and for the efficient functioning of food systems while controlling for external factors such as changing consumption basket, taste, and preferences, changing population growth and income growth.

Against this backdrop, the present study estimates demand and supply projection of major agricultural commodities such as cereals (rice, wheat, coarse cereals), pulses, milk, meat, sugar, fruits, and vegetables up to 2030-31 under alternative per capita income growth scenarios. Prior to forecasting demand and supply projections up to 2030-31, the study has validated the adopted methodology to assess the forecasting performance of the model. A review of earlier studies reveals that, for assessing the demand projection, most studies used per capita consumption of agricultural commodities from the latest National Sample Survey Organisation's consumption expenditure survey round (2011-12). However, since the food basket has registered significant change over the years, the present study has adopted an absorption approach to project

demand for agricultural commodities where the absorption of a commodity is estimated after deducting changes in government stocks from the summation of production and net imports. Expenditure elasticity used for demand forecast in this study is compiled from Kumar et al. (2011) as well as Niti Ayog's Working Group (WG) Report on the Demand and Supply Projections towards 2033 (2018).

The estimated projections show that the food balance sheet will be stable in 2030-31 and the country will be self-sufficient in cereals under all the alternative scenarios. However, commodities like oilseeds, pulses and fruits are expected to experience a supply and demand gap in the coming years. A deficit in the food balance sheet would result in higher imports to meet the domestic demand, in turn, leads to a huge import bill in the long run. Therefore, the policy perspectives need to ensure a balance between domestic production and absorption of these commodities which requires investments in productivity-enhancing and technological inputs since

area expansion is limited. The projections also corroborate with earlier findings that consumption patterns would indeed shift further towards high-value commodities up to 2030-31, which require major investments in market infrastructure, processing, and storage facilities such as warehouses, cold storage and cold chains. Encouraging private investment and public-private partnerships (PPP) in the agricultural supply chain can reduce post-harvest losses as well improve the supply of high-valued perishable commodities. Moreover, with increasing climate crisis impacts over the years, the production of agricultural commodities to meet the increasing demand is a challenging task for the government and requires PPPs in agricultural research and development as well as climate change mitigation research. Notably, advisory services and timely information through agricultural extension services can incentivise farmers to shift towards sustainable agricultural practices as well as ensure the balance between demand and supply of food.

This article is authored by Shyma Jose and Ashok Gulati, ICRIER.

'SUN SHOULD BECOME A STEADFAST ALLY IN AGRICULTURE'



"The technological innovations in the solar energy sector will be productive only when they reach farmers' doorsteps and aid them in agriculture. The country's development will take place only when there is vast research in agriculture which will help farmers," said Chief Minister Siddaramaiah after inaugurating the Soura Shakti Mela organised on the GKVK campus for farmers.

The Chief Minister also launched the Soura Mitra app which will help streamline the applications of farmers who wish to install solar-powered pump sets. More than 5,000 farmers participated in the mela which aimed to help them adopt solar energy solutions and become self-sufficient and reduce the reliability on conventional electricity for irrigation.

Speaking at the mela, Energy Minister K.J. George said, "In Karnataka, we envision transforming the agricultural landscape where the sun becomes a steadfast

ally in powering our fields. Our government is committed to championing initiatives such as the 'Kusum B' project, aimed at incentivising the use of solar-powered pump sets."

"In a concerted effort to embrace sustainable energy and accelerate the widespread adoption of solar pump sets, the State government has significantly enhanced the subsidy, now at an alluring 50%. This strategic move aims to facilitate accessibility for farmers throughout the State," he added.

More than 50 solar power product stalls were set up at the mela. There were also live demonstrations of innovative pump sets, facilitating a hands-on experience for farmers. 'Raita Samvada', an interaction forum, was also arranged where the conversation was exchanged between farmers, solar pump manufacturers, financial institutions, and government representatives.

10th Edition

FLORA
TECH
INDIA

2024

FLORICULTURE, PLANTS, GREENHOUSE
& TECHNOLOGY EXHIBITION

22-23-24 AUGUST 2024
BIEC, Bangalore, India

Co-located with:

15th Edition
AgriTech
India 2024
www.agritechindia.com

BOOK YOUR
STALL NOW !

FLORATECH INDIA 2024

The FLORATECH INDIA is being organized to cover the entire chain in the horticultural and floriculture industry. The show offers a comprehensive range of plants, trees, palms and greenhouse & landscape equipment for exclusive floristry and garden features. Industry professionals can discover new trends, products, ideas, techniques and devices that are highly effective and cost efficient.

For Exhibitors, FLORATECH INDIA 2024 will be the gateway to realize the huge potential of South Asian market as a year-round supplier and consumer, concurrently with 15th edition of AgriTech India 2024 at BIEC, Bangalore, India.

Organizer :



*Supported by:



Official Publications:



For Stall booking and other details, please contact:

Phone: +91-11-49854161 | Mobile: +91 9899380104 | 9811553035 | E-mail: floratechindia@gmail.com | Web.: www.agritechindia.com

INDIA NEEDS MORE STARTUPS IN AGRICULTURE SPACE, SAYS CEO OF DESHPANDE STARTUPS

— Ashish Pandey



Even as India has made a mark in the global startup ecosystem, it still has a long way to go to become the global leader in the segment, says Karthik Sankaran, CEO of Hubali-based startup incubator Deshpande Startups. The startup ecosystem has a great future but the success rate seen in the agriculture space has been comparatively lower, he says. Sankaran, a semiconductor technologist, laments that India doesn't have a single unicorn in the agriculture space.

During an interaction with ET, Sankaran explains how Deshpande Startups aims to enable startups that solve problems for semi-urban and rural India. Edited excerpts:

The Economic Times (ET): How is it to head a startup incubator that mainly aims to help companies which focus on rural areas?

Karthik Sankaran (KS): It is an honour and privilege to be a part of Deshpande Startups, which has supported over 400 startups since 2017. Most of the startups have been founded by entrepreneurs from tier-2 and -3 cities or have addressed problems of rural India.

ET: Please take us through the aspects of entrepreneurship, startup growth and ESG initiatives at Deshpande Startups.

KS: Deshpande Startups aims to enable startups that solve problems for semi-urban and rural India. We offer incubation programmes in the proof-of-concept stage and acceleration programmes for startups in the early revenue phase. We offer mentorship and market connect to make startups investment-ready. We also connect them with investors who they are ready. In our incubation programme, we aim to foster an entrepreneurial mindset. Deshpande Startups also works with universities to offer short-courses on design thinking to inculcate problem-solving skills. We also provide prototyping services to startups. In addition, we help the startups with product validation using our strong

rural ecosystem connection that we have developed over many years.

ET: Where do you see the startup ecosystem heading in India? Has India really succeeded in evolving as a thriving landscape for innovation?

KS: India has the third-largest startup ecosystem in the world. We have over 1,15,000 DPIIT registered startups with 50% of them from tier-2 and -3 cities. We have over 900 incubators. The government has various schemes to provide funding for startups. These indicate that the Indian startup ecosystem has a great future. But we still have a long way to go. Both in the technology space and agriculture space, the success rate has been very low. We do not have a single unicorn in the agriculture space.

ET: How can startups from different parts of the country reach you? What's the process, is there a fee?

KS: Startups addressing problems for semi-urban and rural India can reach us through our website and join our incubation and acceleration programme. We also participate in various government events through which we can provide funding. We have technical and business teams that review the startups based on



Karthik Sankaran

their pitch decks and over a video call. Once the startup is admitted, we have an onboarding process where we assess the needs of each startup and assign suitable mentors.

We also provide product validation and market connections through our sister organisation, Deshpande Foundation, which has a network of farmers and FPOs (farmer producer organisations) through their agricultural programmes. One of the unique value propositions of Deshpande Startups is the connectivity to the semi-urban and rural ecosystem in North Karnataka and Telangana. We also provide prototyping services using our 3D printer lab, PCB assembly facility, mechanical lab and smart lab.

Source: www.economicstimes.indiatimes.com

boost women's empowerment, enhancing access to vital resources like technology, and acknowledging women's invaluable contributions, significant steps can be made toward fostering a more inclusive and sustainable agricultural sector.

At a workshop titled 'Transforming Agriculture: Women, Technology, and Sustainable Growth' organized by the Federation of Seed Industry of India (FSII) and the Forum for Indian Journalists on Education, Environment, Health & Agriculture (Fijeetha), prominent voices underscored these sentiments in anticipation of International Women's Day.

Highlighting the essential role of women in agriculture, Anuja Kadian, Director at FSII and Government & Industry Affairs Director (Asia Pacific) at Corteva Agriscience, emphasized, "Despite their substantial involvement, rural women are often perceived primarily as laborers rather than acknowledged as farmers in their own right. Furthermore, there exists a considerable gender income gap, exacerbated by climate stressors."

"Enacting policies and initiatives that formally recognize the status of women as farmers, ensuring equitable access to land ownership, credit facilities, and agricultural resources, is paramount. Promoting gender-sensitive agricultural extension services and tailored training programs can bolster women's agricultural productivity and resilience to climate change," added Kadian.



Shirley Thomas, Project Director of the Agricultural Technology Management Agency (ATMA) in Indore, shed light on the agency's ongoing efforts to empower women farmers by facilitating the adoption of technology to streamline farming practices and enhance profitability. Dr. Anita Rani, Principal Scientist in Plant Breeding at ICAR-Indian Institute of Soybean Research, underscored the pivotal role of women in agriculture, while Dr. Monica Jain, Professor & Head of the Department of Life Sciences at Maharaja Ranjit Singh College of Professional Sciences, emphasized the importance of empowering women in the agricultural domain.

Progressive women farmers, who have spearheaded transformative changes in farming practices by embracing precision technologies and innovative agronomy solutions, were also honored for their exemplary contributions. Their endeavors have not only doubled farm incomes but have also served as inspiration for neighboring women farmers.

Ananda UVL, Director at FSII and Head of Corporate Communications and Media Relations at East-West

Seed India, highlighted the increasing adoption of precision agriculture methods among women farmers, particularly in Madhya Pradesh. Leveraging technologies such as GPS and data analytics, these farmers are efficiently managing resources like water, fertilizers, and pesticides, resulting in amplified crop yields and minimized environmental impact.

Dr. Ratna Kumria, Director of AgriBioTech at FSII, reiterated the organization's commitment to fostering inclusive agriculture by empowering women farmers and workers through policy advocacy, technological advancements, and strategic collaborations with member companies. The integration of technology into agriculture, including recent advancements like drone usage, has further empowered rural women to augment their incomes.

Attending farmers shared their own inspiring stories and experiences, highlighting the transformative potential of technology and women's empowerment in shaping the future of agriculture.

Source: www.krishijagran.com

SUGAR MILLS CAN NOW SELL POTASH DERIVED FROM MOLASSES TO FERTILISER FIRMS

Sugar mills can now sell potash derived from molasses (PDM) to fertiliser companies to earn additional revenue and also receive nutrient-based subsidies on it, food and public distribution secretary Sanjeev Chopra said. The move is aimed at reducing India's fertiliser imports.

The union government said it has facilitated a mutually agreed price of Rs. 4,263 per metric tonne for the sale of PDM by sugar mills to fertiliser companies for the current year. PDM manufacturers can also claim a subsidy at Rs. 345 per ton at current rates under Nutrient Based Subsidy Scheme (NBS) of the department of fertilisers. Sugar mills and fertiliser companies will now discuss how they can enter into long-term sale and purchase agreements for PDM.

PDM, a potassium-rich fertiliser, is a by-product of the sugar-based ethanol industry, derived from ash in molasses-based distilleries. India currently imports 100% of the potash it needs for fertilisers, in the form of muriate of potash (MOP).

The government has been trying to make India self-sufficient in fertilisers. It aims to achieve self-sufficiency in urea by 2025 by increasing production from 30 million tonnes to 31-31.5 million tonnes and replacing demand for 2.5 million tonnes with alternatives such as nano urea and urea gold. The target could be achieved by setting up new plants with attractive incentives for manufacturers, union chemicals and fertilisers minister Mansukh Mandaviya told in a recent interview.



"Production of PDM domestically will reduce import dependency and will make India atmanirbhar (self-reliant) in the production of PDM. The goal is to produce 1 to 1.2 million tonnes of potash ash from ethanol distilleries and use it in the farming sector. At present about 500,000 tonnes of potash ash generated from ethanol distilleries is being sold domestically," Chopra said.

Distilleries produce a waste chemical called spent wash during ethanol production, which is burned to produce ash. This ash can be processed to produce PDM, which has 14.5% potash content and can be used by farmers as an alternative to MOP, which is 60% potash.

Data from the department of chemicals and fertilisers showed that India's fertiliser requirement ranges from 58 to 63 million tonnes a year, but it produces only about 43 to 46 million tonnes of fertilisers. The rest is imported.

India, the second-highest consumer of fertilisers after China, is entirely dependent on imports for MOP, and also imports 4.3 to 4.7 million tonnes of phosphate rock, 9.1

to 9.8 million tonnes of urea, 5.3 to 5.4 million tonnes of di-ammonium phosphate, and 1.2 to 1.4 million tonnes of nitrogen, phosphorus, and potassium fertilisers.

The government spends a hefty amount on this. India's fertiliser import bill was Rs. 2.2 trillion in 2022-23. It also spends a huge chunk of the union budget on fertiliser subsidies. In 2022-23, the government spent about Rs. 2.55 trillion, a record high, on fertiliser subsidies.

Finance minister Nirmala Sitharaman, in her budget speech earlier this month, said the government would reduce the allocation for fertiliser subsidies by 13% to Rs. 1.64 trillion in FY25 from the revised budget estimate of Rs. 1.89 trillion for FY24. The original allocation for fertiliser subsidies for FY24 was Rs. 1.75 trillion.

Unlock a world of Benefits! From insightful newsletters to real-time stock tracking, breaking news and a personalized newsfeed - it's all here, just a click away! Login Now!

Source: www.livemint.com

EXPERTS ADVOCATE FOR EMPOWERING WOMEN IN AGRICULTURE THROUGH ENHANCED ACCESS TO INPUTS, CREDIT, AND TECHNOLOGY

Despite grappling with numerous obstacles such as limited access to inputs, markets,

technology, training, and credit, coupled with issues concerning land ownership and low incomes, women in

Indian agriculture continue to showcase remarkable resilience. Experts assert that by advocating for policies that

GOA STATE AMRITKAL AGRICULTURE POLICY, 2024 SUBMITTED TO THE GOVERNMENT BY THE DRAFTING COMMITTEE



The drafting committee of the Goa State Amritkal Agriculture Policy, 2024, led by its chairman, scientist, and public policy expert Dr. Nandkumar Kamat, presented the policy to the Hon'ble Minister for Agriculture and Chairman of the Committee, Shri Ravi S. Naik. The committee, reconstituted in May 2023 to finalize the Goa Agriculture Policy, convened in the presence of the member secretary of the committee and Director of Agriculture (DOA), Shri Nevil Alphonso. The esteemed members of the drafting committee present for the function included the Principal of Goa College Of Agriculture, Dr. Suresh Kunkaliker, Adv. Yatish Naik, Ex-minister Shri Prakash S. Velip, Shri Shrirang Jambhale, ex-Director of Agriculture Shri Satish Tendulkar, and member secretary of the drafting committee Ms. Rena Menezes, Deputy Director of Agriculture, DOA.

The Hon'ble Minister stated that as per administrative norms, the policy document, under embargo until its approval, would be presented before the cabinet. Subject to its approval, it would be notified in the official state gazette,



becoming a public document available in Konkani and Marathi. Describing the unique process adopted for formulating the policy, the Minister highlighted the initiative taken by former CM Manohar Parrikar to prepare the State Agriculture policy. The committee was constituted on August 9, 2012, under ex-MP Adv. Narendra Sawaikar, who resigned after being elected to Lok Sabha on April 3, 2014. Following a hiatus, the Minister reconstituted the committee on May 24, 2023, involving stakeholders and experts to ensure a farmer-centric and participative policy-making process. Public suggestions were invited on July 14, 2023, with the deadline extended

until September 17, 2023. The committee was granted an extension until March 31, 2024, to conclude the process.

A completely decentralized approach was adopted, allowing extensive public participation. The Minister facilitated special gramsabhas in 190 village panchayats, receiving suggestions from 39 panchayats. Several suggestions were received and considered by five subcommittees comprising experts. Following international and national guidelines, the subcommittees identified 36 core areas for incorporation into the policy document, totaling approximately 150 pages. This marks the successful conclusion of a policy-making process suspended until 2014.

The designation of the Goa State Agriculture Policy, 2024, is a strategic initiative aligning with the vision of Amritkal, aiming towards India's centenary of Independence in 2047. This period symbolizes a transformative era, during which India endeavors to become a fully developed nation. The alignment of state policies with Amritkal's vision

is crucial for comprehensive progress and development across all sectors, including agriculture, pivotal to India's economy and societal fabric.

This policy has been deduced by involving thousands of people and farmers in an open, liberal, transparent, democratic, through participatory public policy-making process. The Minister extends profound gratitude to farmers, members of the public, elected representatives, NGOs, and the media for their support and cooperation in successfully formulating the Goa State Amritkal Agriculture Policy, 2024.

Source: www.primetogo.com

SLOW AGRICULTURE GROWTH TO KEEP PRESSURE ON FMCG SALES



The persistence of El Nino conditions till the first half of 2024 and its impact on crop yields is expected to weigh on the growth of FMCG sector, which is struggling with a slump in consumption.

The industry is expected to see subdued growth until at least the Sept quarter, estimates released by market research firm Kantar showed.

"Agricultural growth is projected to be at 1.8% in 2024. This is a seven-year low. According to the first estimates of kharif crops released, almost all crops have seen lower yields due to uneven rainfall. This is likely to impact the first half of 2024," said K Ramakrishnan, MD (south Asia) at Kantar Worldpanel.

Poor crop output erodes rural incomes, which is a key

driver of FMCG demand. According to retail intelligence platform Bizom, the top 75 cities with a population of 5 lakh and above contribute about 40% to FMCG industry revenues while the rest - which it counts as rural India - accounts for 60%.

An election year is unlikely to boost consumption either. Analysts at Kantar said that spending during past election years has not translated into

any major gains for the FMCG sector. "On the contrary, with all the freebies announced, there was only stagnation or shrinkage. In 2009, the consumption growth was 0.7%, in 2014 it was static and in 2019, it was negative... we really do not see FMCG at the national level being impacted significantly due to general elections," they said, dashing hopes of industry executives who had been banking on poll spending for demand revival.

Uneven rains in key agricultural states and a tepid festive season last year also hurt the FMCG sector, with the largest player HUL posting a drop in sales for the first time in Q3 FY24 after the pandemic-hit quarter of March 2020.

The analysis by Kantar showed that consumption has declined across most categories and also has

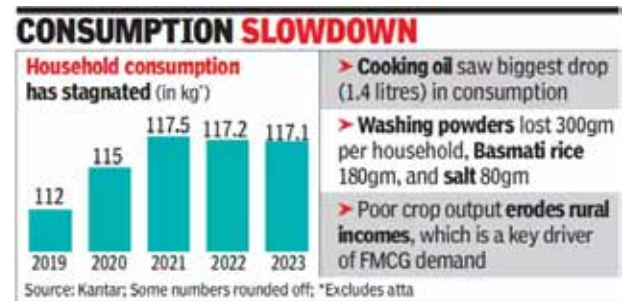
been hit by inflation. This is evidenced by the fact that consumers have been cutting down on purchases of basic items, which can be brought in bulk like rice and cooking oil to save more and manage their finances better.

"Out of the over 90 categories and sub-categories we track, about 50% of them either lost consumption or were static. The biggest such average consumption drop was seen for cooking oils, where 1.4 fewer litres were purchased in 2023 compared to 2022... followed by washing powders which lost 300gm per household, basmati rice which lost 180gm and salt which lost 80gm... each of these are bulk purchase categories where usage can be regulated and that seems to be what is happening here," the firm said.

However, FMCG spends have risen solely on the back of price rises. In fact, removal of atta from the FMCG volume mix for 2023 showed that sectoral volumes grew by only 2.7%. Atta generated 16% of all FMCG volumes last year. ■

Source:

www.timesofindia.indiatimes.com



DATE 25-26-27
OCTOBER 2024

VENUE BOMBAY EXHIBITION CENTER, NESCO, MUMBAI, INDIA

17TH EDITION
Landscape & Gardening Expo 2024

Concurrently with:
flora expo 2024
www.floraexpo.com

17TH INTERNATIONAL EXHIBITION FOR LANDSCAPING, GOLF COURSE, EQUIPMENT, GARDENING PRODUCTS, NURSERY PLANTS, OUTDOOR LIVING AND LEISURE INDUSTRY

BOOK YOUR STALL NOW!

www.landscapeexpo.in

Organizer:

Supported by*:

Associate Partner*:

Knowledge Partners*:

Powered by:

Deliver Media Partner:

For stall booking and other details, please contact:
Mobile: +91 9319608806 | +91 9899380104 | WhatsApp: +91-981152139 | E-mail: ilandscapeexpo@gmail.com

DECODING WOMEN'S TRANSFORMATIVE ROLE IN INDIAN AGRICULTURE SECTOR

Indian women are the backbone of the food security and supply chain. From field to research centres, they are adding resilience to farm practices, writes Susheel Kumar



The importance of Nari Shakti in our society goes beyond the realm of doubt. They are the harbinger of hope and the fulcrum of positive changes. They play multifaceted roles that are integral to the functioning and progress of communities worldwide. Women contribute significantly to the economy, education, healthcare, and social cohesion.

Beyond their roles as caregivers and nurturers, women are leaders, innovators, and agents of change in various fields. Empowering women leads to improved family well-being, better health outcomes, and increased economic prosperity.

International Women's Day 2024 is aptly themed on 'Inspire Inclusion' to forge a better world. A more inclusive world for women means sustainable metamorphosis across diverse sectors - health, education, agriculture, defence, research, innovation and so on. Moreover, gender diversity fosters creativity, leading to more inclusive and sustainable solutions to complex problems. Recognizing and promoting the rights, talents, and potential of women not only enhances their well-being but also benefits society as a whole, contributing to a more equitable and prosperous world.

What thrills me more than anything else is the transformative role women are playing in agriculture and allied sectors. They are, in fact, the backbone of our food security and supply chain. From field to research centres, they are adding resilience to farm practices.

Traditionally underrepresented in the sector, they are increasingly leveraging technology-driven solutions to overcome barriers and enhance their productivity. Through access to mobile phones, internet connectivity, and agricultural apps, women farmers are gaining valuable information on weather patterns, market prices, and innovative farming techniques.

Technological advancements such as precision agriculture, drones, and smart irrigation systems are enabling women to optimise resource use, increase crop yields, and mitigate the impacts of climate change. Digital platforms and e-commerce avenues empower women to directly market their

produce, reducing middlemen and increasing their profits. By embracing technology-driven solutions, women in agriculture are not only improving their economic prospects but also contributing to the resilience and sustainability of agricultural systems worldwide.

They are the most pivotal cog in our agricultural wheel and their contributions span every aspect of farming, from planting and nurturing crops to managing livestock and processing agricultural products.

As per the Census 2011 conducted by the Registrar General of India, the total number of women farmers as cultivators is 3.60 crore and agricultural labour are 6.15 crore in the country. As per the Annual Periodic Labour Force Survey, 2021-2022, agriculture has the highest estimated female labour force participation of 62.9 per cent.

Innovation and Agri-entrepreneurship Development under Rashtriya Krishi Vikas Yojana (RKVY-RAFTAAR) is promoting innovation and agri-entrepreneurship among women by providing financial support and nurturing the incubation ecosystem. Over 173 women startups and entrepreneurs have been supported under the programme so far.

Given the fact that Prime Minister Narendra Modi is very particular about women's empowerment, several enabling measures such as Beti Bachao, Beti Padhao Abhiyan and Sukanya Samridhi Yojana have been initiated to ensure that women head change, which is in sync with the fact that when women thrive, not only does the nation prosper, but the entire world prospers.

Under the PM Kisan Samman Nidhi (PM-KISAN) scheme, over Rs 57,628 crore has been disbursed to more than three crore women beneficiaries (as of June 2023). A laudable effort is on to deploy 15,000 drones and make 'Drone Didis' out of women SHGs under the Pradhan Mantri Mahila Kisan Drone Kendras initiative.

As wholesome inclusive empowerment of women is central to Prime Minister Modi's vision of Nari Shakti, over 13 crore tap water connections in rural households signify a considerable stride, with several States and Union

Territories achieving Har Ghar Nal Se Jal status, ensuring 100 per cent coverage. Over 10 lakh women have received training in using field safety kits for adequate water supply. Over 9.8 crore LPG connections under PM Ujjwala Yojana have freed women from respiratory illnesses.

Swachh Bharat Mission's impact with over 11 crore toilets constructed has ensured dignity and safety for women. Under the SAUBHAGYA scheme, over 2.86 crore electricity connections have illuminated rural areas, rendering kerosene lamps a thing of the past. The PM Mudra Yojana has supported over 29 crore women entrepreneurs. Moreover, the PM Jan Dhan Yojana has significantly increased financial inclusion, creating over 50 crore bank accounts, with over 27 crore female beneficiaries.

It is equally heartening to note here that several State governments are making concerted efforts to bolster female factors in agriculture. The Haryana government has proposed a start-up fund of Rs 10 crore to promote drone manufacturing in the state. The state government intends to train 5,000 sisters called 'Drone Didis' of 500 women self-help groups (SHGs) during 2024-25 in drone operations and maintenance. One drone will be provided to SHGs.

The state government is also in the process of providing training in drone operations to 500 youth farmers through DRISHYA, a state government enterprise. To date, 100 farmers have been trained and provided drone pilot licenses.

As women's roles in agriculture are multifaceted and indispensable, they need to be taken care of with every possible support. Their expertise, resilience, and hard work are fundamental to the success and sustainability of agricultural systems not only in India but worldwide.

Recognising and supporting women's key role in agriculture is essential for ensuring food security, poverty alleviation and rural development. As such, empowering women in agriculture and providing them with equal access to resources, education, and opportunities, is crucial for building resilient and thriving agricultural communities. ■

The author of the article is Susheel Kumar, Country Head and Managing Director, Syngenta India

LAY'S SALUTES THE UNSUNG HEROES OF AGRICULTURE, WOMEN FARMERS WITH PROJECT FARM EQUAL ON INTERNATIONAL WOMEN'S DAY



PepsiCo India's iconic brand Lay's, an enduring advocate for Indian agriculture, commemorates International Women's Day 2024 with the nationwide launch of "Project Farm Equal" in partnership with the U.S. Agency for International Development (USAID) as part of its on-going Global Development Alliance (GDA) project. Launched in Uttar Pradesh, "Farm Equal" goes beyond simply boosting agricultural yields and stands as a powerful testament to Lay's unwavering dedication to celebrating and supporting the vital role women play in the backbone of India's agricultural sector.

Lay's X Project Farm Equal Links:

Recognizing the unique challenges and needs of women in agriculture, Project Farm Equal takes a multi-pronged approach to empower them. It involves the development of women-first tools, ensuring efficiency and comfort in their work. Additionally, dedicated programs assist women in navigating legal and loan systems, providing essential knowledge and support as well as providing information and support on accessing government social support programs. Moreover, comprehensive technical and financial training programs enhance the capabilities of women farmers, enabling informed decisions about their farms and financial matters.

Project Farm Equal recognizes the remarkable contributions of women farmers, many of whom have not only provided relentless support but have also risen to leadership roles in managing farms. Project Farm Equal serves as both a tribute to their indomitable spirit and a catalyst for further empowerment.

This International Women's Day, as an extension to Project Farm Equal, Lay's has taken a unique approach to raise awareness and celebrate the achievements of women in agriculture.

Sharing her thoughts on the initiative, Saumya Rathor, Category Lead, Potato Chips, PepsiCo India said, "Project Farm Equal is a heartfelt tribute to the remarkable women who are the backbone of Indian Agriculture. We take utmost pride in celebrating their spirit and contributions.

This initiative aims to inspire and empower women farmers, creating a transformative impact and contributing to an equitable future."

Adding to the launch, Anukool Joshi, Agro Director at PepsiCo India said, "At PepsiCo India, we understand that empowering women farmers is not just about equity; it's about driving meaningful change within the agricultural landscape. This initiative is a crucial step in our journey to ensure that women have equal access to resources, training, and opportunities, enabling them to achieve their full potential as agripreneurs. Project Farm Equal is a testament to our steadfast commitment to not only recognize but also amplify the invaluable contributions of women in the agriculture supply chain. By focusing on creating an environment that supports their growth and access, we are taking concrete steps towards fostering a more inclusive and sustainable agricultural ecosystem."

"Although women represent more than 40 percent of the global agriculture workforce, women face unequal access to training, technology, finance, and land. In India, USAID and PepsiCo are partnering to strengthen economic pathways for women working in India's agricultural sector, and demonstrating how elevating women in agriculture can lead to greater growth, profitability, and sustainability. As the United States and India partners to advance global development objectives, USAID is proud to support this partnership to enhance women's economic empowerment, and elevate models for global application," said Veena Reddy, Mission Director, at USAID/India.

Project Farm Equal marks a significant step towards fostering gender equality, sustainability, and community development in Indian agriculture. PepsiCo Lay's remains committed to steering positive change and

anticipates the continued success and impact of this groundbreaking initiative. The journey ahead holds promise for ongoing empowerment, growth, and lasting positive influence in the agricultural landscape.

Launched in 1995 in India, Lay's is one of the marquee brands from PepsiCo India and has always been known for bringing in flavours of the world along with Indian flavours that our consumers love. Lay's has a wide range of offerings under its umbrella, with unique and indulgent flavours that cater to both local and international tastes. It is available in six flavours.

Consumers can also log onto the Lay's Facebook page at www.facebook.com/laysindia and follow us on Instagram at www.instagram.com/lays_india/?hl=en.

PepsiCo products are enjoyed by consumers more than one billion times a day in more than 200 countries and territories around the world. PepsiCo generated more than \$91 billion in net revenue in 2023, driven by a complementary beverage and convenient foods portfolio that includes Lay's, Doritos, Cheetos, Gatorade, Pepsi-Cola, Mountain Dew, Quaker, and SodaStream. PepsiCo's product portfolio includes a wide range of enjoyable foods and beverages, including many iconic brands that generate more than \$1 billion each in estimated annual retail sales.

Guiding PepsiCo is our vision to Be the Global Leader in Beverages and Convenient Foods by Winning with pep+ (PepsiCo Positive). pep+ is our strategic end-to-end transformation that puts sustainability and human capital at the center of how we will create value and growth by operating within planetary boundaries and inspiring positive change for planet and people. ■

Source: www.theprint.in

Release Your Company Advertisements in



Please contact:

E-mail: mediatoday2@gmail.com

Phone: 91-8810216208 / 011-46081634

HOW INDIA'S SOUTH-SOUTH COOPERATION IN AFRICA'S AGRICULTURAL SECTOR IS A WIN-WIN GAME

The demand for engaging India through its agriculture-related experience, capacity building, investment, and partnership is high among smaller organisations and enterprises in Africa

Exciting things were happening in Nairobi at the end of February. Indian models for Global South cooperation were in focus over a few days. This was particularly evident at the 11th Sankalp Africa summit session on scaling agricultural innovation through South-South collaboration.

As many as 1500 people with ideas for impacting the development of their communities gathered at this annual event from across Africa. Investors and impact financiers looked at them and interacted to find solutions. Many sessions focused on possible solutions using the success of models in different countries, particularly India.

The agriculture and South-South cooperation session aimed at creating a deeper understanding of the challenges that agriculture value chains face in Africa. The role of agricultural innovations and how targeted development approaches could positively impact them and consequently benefit small farmers were emphasised. These have particular relevance for an enhanced understanding of the enabling aspects, barriers to technology transfers, and their adaptability.

One of the areas that was focused on was South-South collaboration through innovative agricultural enterprises, which could perhaps foster cross-border partnerships. This is relevant as the East African Community expands to include more countries and the Africa Continental Free Trade Area takes more steps towards implementation.

A focused discussion brought together major stakeholders like development partners, policymakers, representatives of farmers, innovative agricultural enterprises, and investors. The Indian model of a bustling innovative agricultural ecosystem, which has been impacted by innovative enterprises serving 15 million farmers, was in focus.

The context was set by discussing how India-Africa cooperation has traditionally focused on the private sector and heavily on agriculture. Even bilateral cooperation at the government-to-government level and through the India-Africa summits has had agriculture at its core. Agriculture features in PM Modi's 10-point action plan for Africa, enunciated in Uganda in 2018.

Yet, do government-to-government initiatives always work? As per a recent book, The Harambee Factor, many of these initiatives, like seed demonstration centres, rural technology centres, farm science centres, and the like, were offered by India to African countries, but these were not easily absorbed by African governments. Wherever the private sector or civil society is involved, the absorption is better and more conducive to backward integration. This approach was then discussed with several partners at the session.



There were two entrepreneurs: Giraffe Bioenergy and Everest Enterprises. They were complimented by investing companies, the Delta 40 and the Katapult VC. The World Bank and the Gates Foundation also participated, as did the CEO of the Cereal Growers Association of Kenya, which brings together half a million cereal growers for better marketing.

Giraffe Bioenergy is developing a focus on three aspects of sustainable development: food security, renewable energy, and creating jobs for women. They focus on this by creating a cassava value chain, which is used for creating edible oils. They help smallholder farmers achieve commercial success and generate efforts for biofuels to be created from the expanding cassava crop. They have scaled up to 500 acres and are looking at commercial success with a 100 per cent female workforce. Their challenges were better seed and production support. If the smallholder farmers could get some financial support, the poverty they could alleviate would be immense.

The Delta 40 Investment Company has worked across the chain in Africa in climate-related business accelerators and incubators. They too look at Indian success stories, much as the cassava food chain looked at parallel food chains in India. The Cereal Growers Association, with half a million member farmers having different sizes of landholdings, said that Kenya lacks India's variety of cereals. The Indian model helps small farmers if they adopt technology, take production support, and gain better access to inputs.

How to do this remains a challenge because remunerative prices are inadequate to deal with these requirements. This is where impact projects, which will help small farmers through investments and support programmes, which are the focus of the Sankalp Africa summit, become relevant.

Similarly, Everest enterprises have an agri-business base of 6,000 smallholder farmers. They provide credit and technical processing for good practices, with a greater emphasis on women. They pointed out that only 1 per cent of Kenyan women have their own title deed to land, which restricts access to credit facilities. This is again where the impact assessment model of funds that is succeeding in India comes up, and if you add technology to it, then women can actually go into agri-tech businesses rather than only become cultivators.

The importance of these discussions basically led to what the Gates Foundation representative called the generation of 'impatient

optimists' looking for transformative levers across agricultural supply chains. A focus on women, on tech transfers for farmers, and ensuring that technology is not only a facilitator for investors becomes important.

Technology applications need to be simple, rather than sophisticated, if they are to be accepted by smallholder farmers. They can also benefit from new soil assessments and better marketing facilities.

This led to the question of why India's example of commodity exchanges had not been fully followed up in Africa. There is a commodity exchange in Ethiopia modelled on the MCX experience, but in the more market-oriented economies of Africa, commodity exchanges have not caught on. This reduces marketing opportunities.

South-South cooperation received a further boost under India's G20 presidency in 2023. It is the leitmotif of the India-Africa Forum Summit processes. The Indian Technical and Economic Cooperation Programme and lines-of-credit succeeded. Now is the time to support the private sector more fully so they can integrate the South-South development cooperation aspect into investment and business formats that will be better sustained and long-lasting.

The demand for engaging India through its agriculture-related experience, capacity building, investment, and partnership is high among smaller organisations and enterprises in Africa. New vehicles for engaging them through impact investing funds trilaterally with G7 country partners are perhaps the way ahead.

The writer is a former ambassador to Germany, Indonesia, Ethiopia, ASEAN and the African Union. He tweets @AmbGurjitSingh. Views expressed in the above piece are personal and solely that of the author.

EVERY VILLAGE TO HAVE AGRICULTURAL CREDIT SOCIETIES BY 2027, SAYS AMIT SHAH

Union Minister Amit Shah Friday said that the Centre has decided to ensure formation of Primary Agricultural Credit Societies (PACS) in every village by 2027.

Addressing an event, Shah said the Centre has introduced 20 new activities to be associated with PACS, enabling them to generate profits. The computerization of PACS has opened up many possibilities for their development, he said. Shah launched the National Cooperative Database and released the 'National Cooperative Database 2023: A Report'. The database aims to identify and address the gaps through a comprehensive analysis.

He said the work on the National Cooperative Database has been carried out in 3 phases. In the first phase, mapping of approximately 2.64 lakh societies in three sectors, namely Primary Agricultural Credit Societies, Dairy, and Fisheries, was completed, he said. In the second, data from various National Federations, State Federations, State



Cooperative Banks (StCB), District Central Cooperative Banks (DCCB), Urban Cooperative Banks (UCB), State Cooperative Agriculture and Rural Development Banks (SCARDB), Primary Agricultural and Rural Development Banks (PCARDB), cooperative sugar mills, district unions, and multi-state cooperative societies (MSCS) were collected/mapped, he said.

In the third, data mapping of all remaining 8 lakh primary cooperative societies in other sectors was carried out, he said.

After this, it was revealed there are over 8 lakh registered societies in the country, which are connected to over 30 crore citizens, he said.

Source: www.indianexpress.com

BakeryTech India 2024

22-23-24, August 2024
BIEC, Bangalore, India

INTERNATIONAL EXHIBITION ON TECHNOLOGY FOR
BAKERY, CONFECTIONARY, SNACKS, CAKES, BAKERY PROCESSING, PACKAGING
& EQUIPMENTS, HORECA, COLD CHAIN, FLAVOUR, INGREDIENTS AND ALLIED INDUSTRIES

BOOK YOUR STALL NOW!

Concurrent Shows:
India Food EX 2024, 14th Edition Grain Tech INDIA 2024

Organizer: Media Today Group
Industry Partners: TANSA, Tamil Nadu Bakers Association, Karakudi Bakery Owners Association
In Association with: Food Processing & Packaging Machinery Industry Association, India
Official Publications: AgriBusiness & FOOD INDUSTRY, AGRITech INDIA

Media Partners: Asia, UDYOGPRERANA, 99 FOOD PROCESSING WORLD, Food & Drink Industry, Food

For stall booking and other details, please contact:
Phone: 011-49854161 | Mobile: +91-9899380104 | WhatsApp: +91-9811152139 | E-mail: bakerytechindia@gmail.com | Web: www.bakerytechindia.com

DATE
22-23-24
AUGUST 2024

15th edition
Agri Tech
India 2024

VENUE
BIEC, BANGALORE
INDIA

INDIA'S LARGEST EXHIBITION ON AGRICULTURE, FARM MACHINERY,
 DAIRY, POULTRY, LIVESTOCK EQUIPMENT, COLD-CHAIN,
 GRAIN MILLING & AGRI PROCESSING TECHNOLOGIES



► **Highlights**

- 350+ STALLS
- 20+ COUNTRIES
- 25000+ VISITORS
- LIVE MACHINERY DEMONSTRATION/ CONFERENCE

BOOK
YOUR STALL
NOW !

◀ **Co-located shows**



Organizer :



***Supported by:**



Official Publications:

Media Partners:



AGRICULTURE PRODUCTS NEWS INDIAN PUMPS AND VALVES REVIEW



*Proposed

For Stall booking and other details, please contact:

Phone: +91-11-49854161 | Mobile: +91 9899380104 | 9811553035 | E-mail : agritechindia@gmail.com | Web.: www.agritechindia.com