

Agriculture & Industry Survey

India's Leading Business Magazine for Agriculture

Mocherla Pradeep Kumar



Venkatesh S Kshatriya

DeLaval provides integrated solutions designed to improve dairy producers' production, animal welfare and overall quality of life.

Chetan Gore

Is passionate about farming for long and started in 2005. He worked on his barren land in Belanki, and developed a custard apple orchard there, 550 kesar mango trees, and grape yard. He also developed a brand name "Organic Village" to sell mangoes at a good price.

Platosan Samarasam

An MBA graduate with a Biotech degree decided to start a farming company and to restrict to moringa. He talks about his experiments with moringa. He says they get income of about Rs. 1.75 lakhs to 2 lakhs per acre with an expenditure of Rs. 60 to 70 thousand.

Dr. Shama Afroz Zaidi

Discusses at length about the importance of micronutrients in crop production. The company's core area of expertise is chelated micronutrients, crop specific nutrition, and hydroponic nutrients.

Dr. Shama Afroz Zaidi



Chetan Gore



Platosan Samarasam

since 2000

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How agriculture has become a powerful political tool in big economies?

Is India still a deficit food economy?

And Russia and other big economies are using their agriculture power as a political and diplomatic tool? Agriculture is not a high priority national goal either with our political leadership or with the non-agriculture industry hubs, the high profile industry lobby that is very entrenched with all the political heavyweights.

For all pretensions, we display agriculture issues don't create the right resonance with the agriculture policy making either at the Centre or the States level politics. As we write there is the looming danger of the entrenched farmer's groups at the borders of the Delhi city and we don't know how long this protest group's politics would go on and if there is any guess to be made it is better to leave the matter as it is, better neglect it or forget and pursue some other topic or course for media reporting. Indian media industries growth itself seems skewed and unpredictable with so much feared mindset at all levels of our living. And see what a contrast it is with the big economies and big agricultural countries that use the agri sector as a powerful tool.

Take Russia for instance, as per the latest write up in the high profile, London Financial Times newspaper that Russia today has emerged as the country's biggest wheat producer and wheat and grains exporter. The title of the article is Russia sows the Seeds of wheat diplomacy. When the long-ruling current Russian leader Vladimir Putin became the President he was told by his colleagues that Russia imported more than 50% of its food was imported. When the president heard this comment, it is told, his face went pale. The report says that when he heard this comment Putin has made it his goal to provide better food security in the country. He vowed that Russia would become self-sufficient in food by 2000 when it had been a net importer and that won't be the scene anymore. As one who attended his meeting said that the President dreaded dependency and thanks to his vow, today Russia is number one in wheat and today Russia has reached a stage where other countries, friends, and foes who are becoming reliant on Russia for their food. The food sector by 2000 was neglected, today others have come dependent on Russia. Today the Russian agriculture goal is 80-95 percent of self-sufficiency in key products. A decade later a grain charter to boost transparency in the market was introduced.

After the political controversy surrounding the annexation of Crimea and stand off with neighboring Ukraine the EU imposed sanctions against Russia and this made Russia become more sensitive to the food crisis and hence the move to boost wheat production and given the Russian gigantic landmass of the country, there is no physical limit to expand agriculture opportunities.

Russia has the world's biggest country by landmass, now the top wheat exporter and passing the US and Canada. Russian exports, wheat, and grains to Saudi Arabia. Cut its oil production to balance its external trade. Today 10 percent of Saudi Arabia's grain imports are from Russia.

There are bigger issues, climate changes and other international issues, food exports to Iran and in return Russia sells Iranian oil. Agricultural outputting the country has grown almost 50 percent since 1991. Russia is not all about oil and gas exports. Says one expert: Russia is not about green land, blue water, and clean food. America is of course still the world's biggest agricultural economy. But Russia's new thrust into agriculture and food exports is catching up.

Still the USDA, the agriculture department of the USA is very well organized and knows each inch of the world's agriculture regions.

India has many lessons to learn from the current developments in the world's leading agricultural regions. We have to know more about how to accelerate our agriculture production strategies.

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Amazon India announces the launch of 'Kisan Store'

Amazon India's Kisan Store will enable farmers across India to get access to more than 8,000 agriculture inputs listed by small and medium businesses (SMBs) such as seed, farm tools and accessories, and more.

'Farm graduates can become self-reliant by setting up agriculture start-ups'

Despite being the oldest profession, agriculture is still not getting adequate returns and for many, it is yet to become viable, Chairman of Karnataka Vikas Grameena (KVG) Bank P. Gopikrishna has said.

He was delivering the keynote address at the Academia-Industry Interface conclave on "Agri Start-ups - Way Ahead" organised by World Bank-funded Project NAHEP-IDP at University of Agricultural Sciences in Dharwad on Monday.

"Famines in the 1960s and 1970s led to shortage of foodgrains and milk in India and forced import of foodgrains. Subsequently, impetus was given to farming in the successive Five Year Plans leading to Green Revolution. As much as 50% of the total 218 million hectares available for farming has already been brought under irrigation. But, unfortunately even after 75 years of Independence, farm returns continue to be low," he said.

Referring to Prime Minister Narendra Modi's plan towards doubling farm income by reducing input cost and increasing market price, Mr. Gopikrishna said that it is time graduates of agricultural sciences became self-reliant by setting up agri-entrepreneurships.

General Manager of NABARD R.M. Kummur sought to know why agricultural universities are yet to produce agriculture start-ups when IITs and IIITs could produce entrepreneurs. "Start-ups in agriculture do not mean just crop cultivation. There are a number of byproducts and related industries which can be established. Over 250 byproducts can be prepared with maize and over 100 byproducts from soya. With both these being major crops in the region, several start-ups can be set up," he said.

Mr. Kummur said that the problem of funds for start-ups could be addressed through CSR funding by incubation centres.

Presiding over the programme, Vice-Chancellor of UAS-Dharwad Mahadev Chetti said that although the country had achieved production of 305 million tonnes of foodgrains, it lacked the requisite storage facilities and consequently, tonnes of foodgrains were getting lost every year.

Prof. Chetti said that to meet infrastructure needs, the Union government has earmarked ₹100 crore for establishing 50,000 agriculture start-ups in the State. And, the State being a pioneer in framing agriculture start-up policy, has drawn up plans to set up at least 5,000 agriculture-related start-ups, he said.

Source : www.thehindu.com

Amazon India has announced the launch of Kisan Store - an online platform that will enable farmers across India to get access to more than 8,000 agriculture inputs such as seeds, farm tools and accessories, plant protection, nutrition, and more. Listed by small and medium businesses (SMBs) these products will be available at competitive prices on Amazon India, with the added convenience of delivery at the doorstep of the farmers.

The store was launched by Narendra Singh Tomar, Union Minister for Agriculture and Farmers Welfare. Commenting on this development, he said.

"I hope this initiative proves to be beneficial for the farmers and the people associated with the farming community to engage the Indian farmers in the modern era of digital economy, increase the productivity of agricultural produce, and provide services like logistics industry."

The online store will be present in languages such as Hindi, Telugu, Kannada, Tamil, and Malayalam and the farmers can buy the items using digital payments.

Amazon has also opened up its network of 5,000 plus Amazon Easy stores for farmers to shop with the help of the store owners who will help them browse through it, identify a product they like, create their Amazon accounts, place orders, and checkout to buy. These stores have thousands of products listed from over 20 brands.

Amit Agarwal, Global Senior VP and country head of Amazon India further added that the online kisan stores will empower the farmer community. He said,

"The launch of Kisan Store marks our first step to create an ecosystem for farmers that will enable them to seamlessly place orders and get products of their choice delivered to their doorstep at the click of a button."

Recently, Amazon also launched its agronomy services for farmers that will provide timely advice and enable them to make accurate decisions on actions required for their crops.

The aim of this initiative is to introduce machine learning technology for better produce and build a robust supply chain infrastructure.

By Bhavya Kaushal

Source : yourstory.com



The lure of 10 million jobs a year

Employment in agriculture has increased. Will it lead to shed the belief that agriculture will not be able to employ further?



The latest data of the Centre for Monitoring Indian Economy (CMIE), a non-government research agency, points out an interesting trend in employment in India. An increasing number of people are joining agriculture for employment in a shift from non-farm sectors like manufacturing and other informal jobs.

The CMIE analysis says that the share of the agriculture sector in total employment has increased to 45.6 per cent in 2019-20, from 42.5 per cent in 2018-19.

Also, the economic collapse due to the impact of the novel coronavirus disease (COVID-19) pandemic has led to huge losses in jobs in non-agricultural informal sectors.

In the last one-and-a-half years, people have returned to villages and have taken up cultivation. Agriculture has been the only sector that reported a decent growth in 2020-21.

Mahesh Vyas, the managing director of CMIE, writes analysing this data, "It is a sign of distress in the labour market where non-agricultural sectors are unable to provide employment and labour is forced to shift to agriculture." He calls it an involuntary reverse migration from "factories to farms".

Migrating people from farm to non-farm sectors has been the key strategy of India to provide livelihoods to the largely informal workforce. And there has been a consistent outflow of people from agriculture.

All this assumed that a critical transi-

tion was happening to ensure decent employment. It was also regarded as a sign of economic growth, finally leading to job creation.

Thus, the CMIE report comes as a shock. We are now in an employment situation that we have been encouraged to transit from since decades. Agriculture lost favour with people because it has not been remunerative.

Also, this sector has already plateaued in employment generation capacity. Irrespective of all these, agriculture still employs over 50 per cent of the country's workforce. Vyas says it is an economic distress as many more millions have rejoined a sector that has an average wage of Rs 291 per day.

Other sectors not creating employment and agriculture being a sector where people are joining out of distress will have another political ramification. The National Democratic Alliance (NDA) government has promised 10 million jobs a year as well as doubling farmers' income by next year. At the current rate, both seem to be not happening.

This reminds one of a development some 20 years ago that brought unemployment into focus. Rather, this set in motion the strategy that agriculture would not be further able to create employment.

In 1999, the ruling NDA led by the late Atal Bihari Vajpayee first promised 10 million jobs a year. He set up a Task Force on Employment Opportunities under Montek Singh Ahluwalia to suggest ways to achieve this.

Ahluwalia submitted the report in 2001. It gave the verdict that in the future, agriculture would not be a job creator anymore. An annual economic growth of nine per cent would lead to creation of jobs anyway. We have not achieved that kind of consistent economic growth and as data points out, economic growth per se has also not created jobs as expected.

There was another development that escaped everybody's attention in 2002. Prime Minister Vajpayee also set up another task force called the Special Group on Targeting Ten Million Employment Opportunities Per Year.

This was headed by SP Gupta, a former member of the erstwhile Planning Commission. Its findings were a contrast to the Ahluwalia one. It maintained that the agricultural sector was a 'gold mine', with the potential to create at least 11 million jobs over five years.

It emphasised horticulture, floriculture, agroforestry, minor irrigation and watersheds among others as labour-intensive, high-value areas. These are the same ways that the Modi government is focusing on doubling farmers' income.

But the moot question is: How will India be fully employed? The debate over farm vs non-farm needs a fresh look. Jobless growth is happening but the farm sector has beaten this trend in recent years. It shows that agriculture might not have lost all its potential. It just needs a new political deal to revive.

By Richard Mahapatra

Source : www.downtoearth.org.in

Adani in the eye of the storm as Himachal apple prices crash

Apple growers feel that instead of incentivising big corporates, the state government should instead help farmers build cold storages.

The main argument of those rallying behind the Bharatiya Janata Party government's controversial farm laws; that the free market economy will reward farmers, faces a major dent in the wake of the crashing market price of the apple crop in Himachal Pradesh.

The Rs 5,000 crore apple business in the hilly state, which mostly runs on the free market model, was dealt a major setback right at the beginning of the season when the Adani group, a big corporate buyer in Himachal Pradesh's apple market, announced its opening price for A-grade, premium quality apples at just Rs 72 per kg, much lower than the Rs 88 per kg it offered last year.

This led to a disruption in the whole market, with apple growers slamming the corporate giant for the price crash and the consequent skewed income to the growers.

Adani properties are already under siege in Punjab and Haryana due to protests by farmers who blame the big corporates – and their tendency to monopolise the agriculture market – for the controversial farm laws. Now in Himachal, where trade is open, apple growers say Adani's functioning is proving detrimental for them.

Dimple Panjta, president of The Himalayan Society For Horticulture and Agriculture Development, a Rohru-based NGO consisting of a large number of apple growers, told The Wire that in 2011, Adani bought A-grade quality apples at Rs 65 per kg. A decade later, it is offering just Rs 7 more.

"Is this what we really deserve," asked Panjta. "While our farm inputs expenses have gone up manifold, the company brought in by the government to help farmers in

getting good market rates is resorting to exploitation of farmers by continuously reducing procurement rates."

According to him, a decade earlier, the cost of production for the growers, inclusive of packaging costs, was Rs 250 per box. Now it has gone up to Rs 600 per box. "But see the returns, it is [the] same [as] a decade earlier," he added.

Panjta said the problem with the Adani group is that it carries a lot of weight in the apple market. Even though it buys no more than nine or ten lakh boxes every season (every box has 25 kg of apples) – which is not more than 3-4% of the state's total apple production – Adani's offer price somehow sets a benchmark for the rest of the market. This is what destabilises the rates.

"Traders often say when Adani is buying at 'X' rate, why should they [the traders] pay more?" said Panjta.

He said, moreover, that Adani plays it smart with its offer rate. Its offer price is for the premium quality of the apple and pays quite less for medium and small size of apple. Further, if the apples are discoloured, the rates are far less than farmers' production costs. Now that it has fixed the rate of Rs 72 per kg for A-grade apple, the average earning of an apple grower, if they supply to Adani, will not be more than Rs 50 per kg.

"On the other hand, there is clear evidence that apples procured by the com-

pany at a cheap rate from the farmers are sold in the retail market for Rs 250-300 per kg in off season. But farmers don't have the luxury to hold back the produce and wait for the day when the rates go up in the retail market. We are under compulsion to sell our crop soon after the harvesting," he added

"From reliable sources, our NGO has come to know that the Adani group, which was given land at a token price to set up three cold storage centres in Rampur, Rohru and Sainj in Shimla District, is violating land lease rules. Under the rules, they must leave 25% [of the] space in their cold stores for the Himachal growers, which we firmly believe is not [being] complied with. We have written a letter to the chief minister to inquire about it and make the findings public," he said.

'What was the use of providing subsidised land to Adani?'

Lokinder Bisht, president of the Progressive Growers Association, told The Wire that Adani was given the land to set up its cold stores at subsidised rates, but he questioned what good it did for the growers ultimately. He said that before Adani announced its rate, the premium A-grade apple was being sold for Rs 80-90 per kg, at over Rs 2,000 per box. But the price crashed soon after Adani's Rs 72 per kg announcement.

"Keep aside its commitment towards [the] welfare of Himachal's apple industry in lieu of subsidised government land, where is the company's corporate social responsibility anyway? They should ideally announce rates more than the prevailing market rates but for them, their profit is supreme [to] the growers interests," he said.

Read full article @ <https://bit.ly/3l16jmi>

Source : thewire.in





India's first building made of bio-bricks at IIT-Hyderabad is a great example of 'wealth from waste'

Developed to counter the air pollution caused by stubble burning, bio-bricks cost only about Rs 2-3 when mass-produced and can be an extra source of income for marginal farmers

The Indian Institute of Technology (IIT) in Hyderabad on Thursday inaugurated India's first building made of bio-bricks from agro-waste. Calling it a perfect illustration of 'Wealth from Waste', IIT-H Director BS Murthy said the institute will submit a proposal to the Ministry of Agriculture to promote its wider adoption by the rural community.

Researchers at the IIT demonstrated that agricultural waste can be converted into sustainable materials which, in turn, can be used to build eco-friendly, cost-effective structures. In April this year, the team secured a patent for the

bio-brick material and its manufacturing technology. The technology has been developed by research scholar Priyabrata Rautray under the supervision of Professor Deepak John Mathew at the Department of Design.

"This innovation is going to be a game-changer for rural village farmers as their agricultural waste will become an income generator for them. Also, this will give employment to them during their lean period," Professor Mathew said. They have jointly published two research papers on bio-bricks at international conferences at ICED 2019, Delft University and ICoRD 2021, IIT

Researchers at the IIT demonstrated that agricultural waste can be converted into sustainable materials which, in turn, can be used to build eco-friendly, cost-effective structures.

Mumbai. Burning of agro-waste after harvest is a major cause of air pollution. The bio-brick technology was developed to counter such pollution caused by stubble burning. "Bio-bricks are economical and are found to be 1/8 and 1/10 of weight for similar volume compared to burnt clay bricks and concrete blocks, respectively. Compared to burnt clay bricks, Bio-bricks will cost about Rs 2-3 when mass-produced.

Farmers can make this material at the site and further reduce labour costs. Manufacturing bio-bricks can add to the marginal farmers' income and create a new employment opportunity during off-seasons," said a press release.

According to the researchers, the material exhibits excellent thermal insulation and fire-retardant properties. When used in roofing and wall paneling, it can effectively reduce heat gain by 5 - 6 degrees. They realised that generation of agro-waste in the country was huge while the demand for regular bricks was growing exponentially, leading to the loss of fertile topsoil and more air pollution. "I sincerely hope farmers and villagers adopt this technology to build their homes," Rautray said.

As part of the BUILD (Bold Unique Idea Lead Development) project to demonstrate the strength and versatility of the material, a prototype of a guard cabin was designed and executed by the team on space allocated on the campus. The building made of bio-bricks is supported by a metal framework.

The roof structure is made of bio-bricks over PVC sheets to reduce heat gain. The inside and outside of the wall is cement-plastered to protect the bio-bricks from rain.

Source : indianexpress.com

Online Meetings



www.agricultureinformation.com

Upcoming events

SEPTEMBER 13, 2021

3:00 pm

Mr. M.G.Sathyanarayana on "Commercial cultivation of different varieties of tissue cultured bamboo (Dandrocalthas Family) plants"

SEPTEMBER 14, 2021

3.00 PM

Mr. Sumeet Deshmukh on "Use of solar fencing in farming"

05.00 PM

Mr. R S Venkatraman on "Tamarind : Demand and uses – Domestic and export markets"

SEPTEMBER 15, 2021

3:00 pm

Mr. Nitin Singhal on "Soil borne disease management"

05.00 PM

Mr. Ramakoti K.Venkataramana on "Low budget natural farming"

SEPTEMBER 16, 2021

3:00 pm

Ms. Archana Agrawal on "Aloevera gel extraction and marketing"

SEPTEMBER 20, 2021

3:00 pm

Mr. Devvrat Sharma on "How to make beekeeping a successful venture ?"

05.00 PM

Dr. Sivalingam Elayabalan on "Artificial intelligence powered smartphone banana app(TUMAINI) for pest and disease detection"

SEPTEMBER 22, 2021

3:00 pm

Mr. R. Kantharaj and Ms. Sunitha H R on "How to get organic certification for the farm produce and processing units"

SEPTEMBER 23, 2021

3:00 pm

Mr. Sachin Bakshi on "How to do agriculture as business"

SEPTEMBER 24, 2021

05.00 PM

Mr. Chinmay Rajwade on "Whole process of setting-up a hydroponics farming business"

SEPTEMBER 27, 2021

5:00 pm

Dr.Yugraj Yadava on "Value chain in marine fisheries India"

SEPTEMBER 28, 2021

3:00 pm

Ms. Priyanka Pramod Kharche on "What is integrated farming system? "

05.00 PM

Mr. Sai Krishna on "How breeding is done for oil quality in mustard"

SEPTEMBER 29, 2021

3:00 pm

Dr. Madhumita Dash on "AI and IoT in solving major agricultural challenges of today"

05.00 PM

Mr. Mendu Srinivasulu on "Role of Farmer Producer Organizations (FPOs) in promoting smart farming and smart agribusiness in India"

SEPTEMBER 30, 2021

3:00 pm

Mr. M. Lakshmi Narayanan on "Value addition in banana"

05.00 PM

Mr. Khan Shaker on "Market strategy and planning hydroponics"

OCTOBER 1, 2021

3:00 pm

Mr. Shaji GR on "Scope of Jack fruit value added products after pandemic"

OCTOBER 5, 2021

3:00 pm

Ms. Saroj Patel on "Stevia farming and value addition in stevia"

OCTOBER 8, 2021

3:00 pm

Mr. Rajender Kumar on "Nutraceutical – Emerging greenhouse crops"

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Recently Completed Meetings

Mr. Surajit Sinha on "Achieving food traceability through technology"

Mr. Surajit Sinha is the Head - Agritech at Farmsio in Chennai, Tamilnadu. He is into

- Market linkage through digital technologies and a professional over more than 16 + years of success in achieving revenue, market expansion, profit and business growth.

- Reshaping agriculture through digitization and impact into a single platform to the millions of smallholders

- Worked on input marketplace integration, market linkage and direct advisory

To know more view <https://bit.ly/2YnOovx>

Dr. Shashikant Joshi on "New alternatives for plant growth promoters"

Dr. Shashikant Joshi is the Director of Swakit Biotech Pvt. Ltd. in Bengaluru, Karnataka. To know more view <https://bit.ly/3ygvwy4>

Mr. Nesibur Rahman Barbhuyan on "How to grow agarwood plants and their benefits"

Mr. Nesibur Rahman Barbhuyan is the Proprietor of Neria Live Enterprise in Lanka, Assam. To know more view <https://bit.ly/3gofBHU>

Dr. Priya P. on "Improved agronomic practices in chickpea"

Dr. Priya P. is an Assistant Professor (Agronomy) at College of Agriculture (University of Agricultural Sciences, Dharwad) in Haveri District, Karnataka. Her interests are Nutrient Management, Organic Farming, Precision Farming & Nanotechnology and Integrated Farming Systems.

Mr. Arun Patel on "How to run a successful green house"

Mr. Arun Patel is the Director of Keisha Green in Ahmedabad, Gujarat. To know more view <https://bit.ly/3somygy>

Mr. Kodali Naga Pradeep Kumar on "Commercial business about dragon fruit crop"

Mr. Kodali Naga Pradeep Kumar is a Farmer from Mulakalacheruvu Village in Chittoor District, Andhra Pradesh. His interest is on pink to pink dragon fruit farming, teaching and commercial business about dragon fruit crop.

Mr. Mahalingaiah on "How to improve soil fertility"

Mr. Mahalingaiah is a Farmer from Rangapura, Tumkur District in Karnataka.

Mr. Mahalingaiah says we should stop the criminal activity of burning biomass. Instead utilise the same for increasing soil fertility, porosity, infiltration of rain water, benign microbial flora & fauna, arrest soil erosion and bring down global temperature.

Mr. Jeevan on "Processing and value addition of millets"

Mr. Jeevan is the Co-Founder of Orillet Foods International in Anantapur, Andhra Pradesh. His interest is in processing of millets and living a healthy life.

Mr. BK Menon on "Organic cultivation methodology - Dense crop farming and organic quality certification"

Mr. BK Menon is the Proprietor of Green Planet Agri in Bengaluru, Karnataka. To know more view <https://bit.ly/3w2VDIz>

Dr. Bikash Ghosh on "Current practices used in sapota farming"

Dr. Bikash Ghosh is a Retired Professor at Bidan Chandra Krishi Viswavidyalaya in Mohanpur, Nadia District in Bidan, West Bengal.

Dr. Rajeshnallaiah on "Agri product value addition"

Dr. Rajeshnallaiah is the Director & CEO at RNR Agri Developers in Madurai, Tamilnadu. To know more view <https://bit.ly/3vvPKCc>

Dr. PK Shrivastava on "Costing for a dairy farm"

Dr. PK Shrivastava is a Dairy Business Consultant at M/s. Dairy Consultancy India in Bengaluru, Karnataka. To know more view <https://bit.ly/25j19bn>

Mr. Achyuth Reddy Gomaram on "Water conservation and management in agriculture and farming"

Mr. Achyuth Reddy Gomaram, Director, Suregrow Farms Pvt.Ltd., Hyderabad, Telangana is a college dropout who has set an example for youth to look at agriculture and farming as a profitable and respectful profession. His initiate #stopfarmersuicide and #BeAFarmer were shown remarkable change in the way people look at agriculture and farming. To know more view <https://bit.ly/31jt3Ep>

Mr. Sameer Chadha on "Vetiver farming and oil distillation process"

Mr. Sameer Chadha is the Co-Founder of Chadha Aroma Farms in Lucknow, Uttar Pradesh. His interest is on aromatic & medicinal farming and distillation of aromatic crops.

Dr. Sanjay Kumar on "Medicinal and aromatic crops suitable for cultivation under waste lands"

Dr. Sanjay Kumar is the Principal Scientist in CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow, Uttar Pradesh. He says, now a days our agriculture need the support of crop diversification through medicinal, aromatic and horticultural crops. Some medicinal and aromatic crops suitable for cultivation under waste lands and underutilized lands.

Dr. Bikash Ghosh on “Current practices used in mango farming”

Dr. Bikash Ghosh is a Retired Professor of Bidan Chandra Krishi Viswavidyalaya in Mohanpur, Nadia District in Bidan, West Bengal.

Mr. Amol V Khandare on “Ashwagandha - Commercial cultivation on big area, contract farming and guidance at one place”

Mr. Amol V Khandare is the Head- Training and Capacity Building at International Institute of Advanced Agriculture Skill Development- IIAASD in Jaipur, Rajasthan. He is an Agriculture Graduate from Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra and Post Graduate in Management from University of Pune. Mr. Amol V Khandare's interests are commercial cultivation of medicinal crops and organic farming. He has 11 years of experience in herbal plants cultivation, management, marketing, export, processing etc.

Mr. Surajit Sinha on “Farmers loan risk mitigation through use of remote sensing solution”

Mr. Surajit Sinha is the recipient of National Award from H.E The President of India in Dec 2014 for the development of new cost effective product for manufacture aimed at improving the life of persons with disabilities. To know more view <https://bit.ly/2YnOovx>

Mr. Jayamurugan N on “Manufacturing and processing of cashew nuts”

Mr. Jayamurugan N is the Proprietor of Guna Traders in Cuddalore, Tamilnadu. To know more view <https://bit.ly/2V56DYD>

Mr. Vibhor Agarwal on “Lemongrass - Adding health & economic value”

Mr. Vibhor Agarwal is the Founder of VA Agro Farm in Bareilly, Uttar Pradesh. To know more view <https://bit.ly/3fgHUaz>

Mr. Upendra Halkandar on “Areca leaf products manufacturing project”

Mr. Upendra Halkandar is the Proprietor of Vikalp Ecowares in Nashik, Maharashtra. To know more view <https://bit.ly/3ib8vre>

Dr. A. Amarendra Reddy on “Schemes for value addition and food processing industry development”

Dr. A. Amarendra Reddy is the Principal Scientist(Agricultural Economics) at ICAR-Central Research Institute for Dryland Agriculture in Hyderabad, Telangana. He got trained in agricultural economics, but worked in wide range of areas like poverty, public policy, micro-finance and agricultural economics. To know more view <https://bit.ly/2VdFcve>

Mr. Maharshi Dave on “Importance of value addition in agriculture products”

Mr. Maharshi Dave is the Director of Farmbridge Social Support Foundation in Bharuch, Gujarat. With advancement in technology, farmers have ensured food security of 1.3 billion people of the country along with exporting the surplus produce of fruits and vegetables. But, farmers have been struggling with the demand – supply mismatch and price wars. To solve this pain point, utilization in value addition to the agricultural produces is benefitting not only farmers but creating niche for entrepreneurs.

Mr. Niraj Shah on “Turmeric - Adding healthy & economical value”

Mr. Niraj Shah is the CEO at HnyB Tech-Incubations Pvt. Ltd., in Ahmedabad, Gujarat. He says, turmeric is one of the healthiest spice of all. It is basically a root crop and brings economic value in different types of forms. After harvest, different forms of turmeric have great market globally and India is one of the important exporter for the same.

Mr. Muthu Raj S on “Processing of moringa and value added products”

Mr. Muthu Raj. S is the Proprietor of SVM Exports in Tuticorin, Tamil Nadu. His interest is in moringa cultivation / drying process/ value addition etc. To know more view <https://bit.ly/2TDJ8oL>

Mr. Tejas Joshi on “Selection of different product processing machinery”

Mr. Tejas Joshi is the Manager-Technical at Fixit Engineering in Mumbai, Maharashtra.

Mr. Tejas Joshi says there are two ways the agriculture business runs.

1. Sell the products (Fruit/Veggies/Grains) in market to generate revenue
2. Use the product for further processing (Flours, Oil, Medicine) and generate higher revenue

Mr. Lucky Agrawal & Mr. Mayur Chumbalkar on “Cashew nuts processing in detail”

Mr. Lucky Agrawal & Mr. Mayur Chumbalkar are Managing Partners of L & M Dryfruits Processing Industry in Washim, Maharashtra. They are engaged in Manufacturing an assortment of Whole Cashew Nut, Flavored and Roasted Cashew Nut, Raw Cashew Nut, etc.

Mr. Vinod Kumar Dubey on “Ecofriendly approach for management of whitefly and other pests on arecanut”

Mr. Vinod Kumar Dubey is a Ph. D. – Research Scholar at Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar. During this meeting Mr. Vinod Kumar Dubey will speak on Ecofriendly approach for the management of whitefly, Aleurocanthus arecae David & Manjunatha and wax scale, Chrysomphalus aonidum (Linnaeus) on Arecanut.

Mr. Kulkarni HB on “Organic Food FPO's challenges and opportunities in Madhya Pradesh”

Mr. Kulkarni HB is the President of Federation for Re-farming Societies in Bengaluru, Karnataka. To know more view <https://bit.ly/3ByAKrA>

Mr. Nitin Singhal on “Value added products of neem”

Mr. Nitin Singhal is the Director of Huntin Organics Pvt. Ltd., in Faridabad, Haryana. To know more view <https://bit.ly/3y1nlke>

Mr. R S Venkatraman on “Value addition of sugarcane jaggery”

Mr. R S Venkatraman is the Proprietor of Natura Food Products in Bengaluru, Karnataka. He says majority of the sugarcane jaggery production units are following the traditional production process only. It is mainly because this industry is run by traditional people only and hence there are no new entrants who could think differently. A lot needs to be done right from varietal selection to identify suitable variety for can production keeping in view the shelf life besides suitability for product diversification. Again new product developments is to be market oriented.

Online meetings are available only for Premium Members



Talking to

Venkatesh S Kshatriya

DeLaval Pvt Ltd. Pune, Maharashtra

DeLaval is a dairy farming solution provider for over 140 years. DeLaval provides integrated solutions designed to improve dairy producers' production, animal welfare and overall quality of life. Their first solution was dairy cream separator, which revolutionized the dairy farming industry. This was followed by many other innovations, and the milking machine itself has completed 100th year of creation in 2017. They innovate to transform dairy farming every year. Robotic Milking system is one of the prestigious and sophisticated milking systems, extremely popular abroad and India. Started 1878, DeLaval continues to help dairy farming industry and dairy farmers.

DeLaval is 29 years old in India and have set up milking machines, milk chillers, milking parlors and other several solutions helping the dairy farming industry and dairy farmers. The challenges that were mitigated by mechanizing the dairy farming industry are:

- Small and scattered milk collection
- Ignorance of hygiene practices
- Poor infrastructure
- Low feed quality
- Availability of skilled manpower and other resources
- Cost of production and productivity

A small farmer sometimes may not have the means to run a hygienic farm. This affects the health of the cows, nutrient quotient of milk, productivity, and stressful environment for the workers. Also, there is a chance of quality compromise when he gets milk in small containers to a central place of collection. To counter these adverse effects, dairy farmers are moving towards Industrial Farming or Commercial mechanized Hightech dairy farming, by moving to integrated farming and mechanized farming, using mechanized tractors to bullock cart, moving from furrow irrigation to sophisticated irrigation systems like drip irrigation, Crop management systems. This is similar to the steps taken by the dairy farmers by moving to high yielding cross breed cows and highly productive desi cow breeds like Gir, Sahiwal and others.

Commercial dairy farming is not backyard farming but a business



Mr Venkatesh S Kshatriya is the Regional Sales Manager, DeLaval Pvt Ltd. Pune, Maharashtra. He has specialized in providing High-tech dairy farming solutions. In an interview conducted recently, he talks about mechanization in dairy farming.

with sustained productivity and profitability. Here are the different farmer profiles in this sector.

- Marginal Farmer with 1-3 cows to 10-50 cows
- Modern Indian Farmer with 100+ cows to 300+cows
- Investor farms with 1000+ cows

Marginal Farmer: Usually has cattle for his own consumption (for milk, agriculture and/or manure). So, this is not a business, but a backyard farming. The cattle that he has is to support his family with milk and dung. When he wants to upscale to 10-50 cows and turn profitable, he will need better system to manage. They may have small mechanization like, bucket milking system, small chaff cutter or a small milking machine. This segment can also have seasoned farmers who know their fields very well, how to run dairy farming, their animals, feed, and mechanisms.

Modern Indian Farmer: When the herd size more than 100, they need different systems for better management. This segment may be progressive farmers and entrepreneurs. The farmers in this segment may be



young, look at dairy farming as a commercial set up and are open to uptake technology.

Investor Farms: These are the farmers / persons who invest in commercial set up of dairy farming. They will have separate resources for managing the farm, milking, and for managing various departments with the farm.

For marginal farmer with 10-50 cows, “Free Housing” type of system is recommended. In this type, there will be less stress on the cows, less work burden, less resource unlike traditional dairy farming. In the Free housing set up, cows move around freely to graze. Water troughs and feed in the feed table are freely and readily available. At the end of the day, they come back to the shed and rest. This creates a stress-free environment for the cows increase the productivity and the quality of milk and reduce labor. The only thing that was changed from the traditional farming is just the Free Housing setup.

The bigger setup of farm with 100-300 cows, free housing is not sufficient. For this, “Free stalls” system is recommended. Here the living area is set up with partitions /cubicle dividers with rubber mats and mattresses, where cows go, feed, and rest. They will go to common feed area to feed and can roam around in the open area “Paddock”. If in a dry sandy place, the cubicles can have sandbags which will be more comfortable to the cows. This set up does not fit in wet climate and black soil where in the the bedding materials will not dry quickly and not good for animals. In this kind of housing system, the cows will be resting in a designated area, and the manure will be in the “Manure Alley”. The manure will be cleaned by either tractors or automatic scrapers making management easy. It can be easily transported

to manure tank and then to treatment areas or a biogas plant for further treatments like De-watering, Wormy compost, etc

Feed Preparation: This is the labor-intensive process, if feed preparation and storage are properly planned, will result in efficient use of labor and improved feeding. Depending on the size of the farm there will be different machineries like chaff cutters and feed choppers. Some of the different type of chaff cutter are:

- Operated manually
- Operated by motor
- Operated by tractor
- Pulverizer – to crush corn and materials

For a large-scale mega farms and small-scale farms, these chaff cutters and feed preparation machineries are needed, but for large scale farms, on a very different capacity and range. These machineries will chaff the fodder, convey to the trolleys, then to the machineries to bale, and wrap them ready for the storage in large scale farms. Green grass can be kept in good condition by keeping in a silage. In small scale farms, the Silage, PVC /Tarpaulin sheets will be lined in a shallow pit, where the chopped green grass will be compacted and kept covered airtight. Once it is fermented, in about 60 days, that will be ready to use. If the silage is prepared properly, this can be used for about 4-5 months.

For a farm with more than 100 cows, one

should move to bigger Silage - “Bunker” style above the ground level. On an average, one bunker can hold feed for about one month. The silage preparation can be scaled up depending on the number of cows. There are companies that manufacture these silages. Instead of taking the trouble of making bunkers, you can buy the silage bales. Their capacity is in the range of 50 kg, 100 kgs and 300 kgs. They are available across India in the states like Tamil Nadu, Karnataka, Maharashtra, and Andhra. This is one of the latest developments in the Dairy Industry.

Small dairy farms with cows ranging between 10-50 without any farming land, but want to give the cows fresh grass feed, can opt for hydroponics fodder system. In this system they can sprout grains like wheat, corn, or other grains. The sprouts are hydroponic grass, grown for about 6-8 days to be fed to the cows. These are used in smaller farms, goat farms, and horse farms. This system can increase the nutrition value and reduce concentrate cost.

Milking is a labor-intensive dairy process, which can be mechanized using ‘DeLaval Milking Machine, DeLaval Speedline Milking Systems, DeLaval Automated Milking Parlours” Mechanization is needed to:

- 24 X 7 X 365 days dedication
- Milk Quality
- Cost of feeding Vs Milk production
- Scarcity of skilled milkers
- Mastitis
- Stress on Dairy Animals

Advantages of Mechanization:

- Increase in milk yield and quality
- Saves time – 32hrs/cow / year
- Reduced Stress and dependency on Human milker
- Easy operation and maintenance
- Affordable and feasible

On an average, one person can milk only 5-6 cows at a time. However, using milking machines with stable electricity and power, any number of cows can be milked. When using

