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Agriculture & Industry Survey

India's Leading Business Magazine for Agriculture

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Proprietor - Rynco Orchids
Trivandrum, Kerala

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Founder Director & CEO
Clean Green Biosystems, Chennai

Arnab Vohra
Managing Director
Urban Growers LLP, New Delhi

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What are underwater farms? And how do they work? 46

Not forget Agriculture issues!

Towards sustainable agriculture!

Not pursuing an unsustainable rural development strategy!

Our conception of agriculture and rural development as things stand is so out of date and not in accordance with how the Indian rural realities are shaping up with rapid urbanization and employment opportunities are opening up with education spreading on a vast scale.

Agriculture is a serious subject. It needs a more open mind and a very different socio-cultural outlook. Agriculture is all about farming. And land ownership. This is a sector where too many inequities and inequalities and injustice and much suffering are accumulated over the years. More because of our urban-elite desires reforms can't take place. Farm, rural issues are also very complex and complicated too!

They are basic and critical for our peoples' well-being, social harmony, and also for health and living standards. The rural social hierarchies need to be addressed in some depth.

Our universities also must study the many social and sociological issues of rural society. There are many social classes and there will always be a feudal class and a workers' class to make farming a paying activity.

We as a people are too much preoccupied with politics of a very superfine layer. After Independence, some seventy years have passed and yet some colonial hang ups persist. One is the food ration shops! They are surviving the war years and they are a reminder of the long history of poverty, successions of famines, and re-born deaths. In 1860 alone, there were three major famines in Punjab in 1860, 1868, 1865 in Orissa in Rajputana states in 1865 and later also in the same century in 1876-78.

The point I want to make here is that the Indian economy suffered a great deal under the British rule and there were periodic families and record deaths of people took place. Now the one big lesson we, the rulers, have to learn is that agriculture and food production are so intrinsically linked that there is always the danger of doom shortage which now, in our own time, there is the new politics of free distortion of food articles under the democratic governance.

Now, the more populistic governments are winning elections with so many wrong policies like distribution of cash to the voters, there is every possibility that poverty is unlikely to go away at the time, even now there is an 11 odd percentage of people living under the poverty line. Democratic government is also becoming more and more corruption-driven regimes and there is never the situation likely to become debt-free regimes.

There is a reported 5 lakh crore debt for the Tamil Nadu government alone. There is also the likelihood of unsustainable economic management, the 100-day poor worker's employment scheme, and how long the governments can sustain this unsustainable rural employment scheme possible?

Surely, agriculture in India would be always a small farmers economic capita land ownership is likely to down further. With one or two hectares per capita would always be an unsustainable rural economy reality. Sow seeds to discuss further in some depth, the future of Indian agriculture. For this purpose, we need first to meet the farmers face to face and seek their sympathetic response. The current imbroglio over the nearly 8-month old agitation in the Capital needs to be called off.

One suggestion is that we accept the farmer's demands in to and as the Supreme Court itself had suspended the laws indefinitely there is no loss of face for the government and also the farmers. All that is needed is to have an open mind and also shed any egos and seek reconciliation.

If there is a will, there are always ways!

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How does agriculture matter to all sections of society?

YET HOW AGRI ISSUES ARE RELEGATED TO LOWER PRIORITY!

Yes, agriculture doesn't rank high in any of our day-to-day concerns except in our meals times! Yes, agriculture has evolved over time in such a way that when we think of agriculture, we think of villagers and rural India and rural India is what it is and so too agriculture and that is why even now we had ignored the farmers that they continue to agitate, maybe not so in a rational way that the three laws that are at the heart of the controversy and Delhi borders are uttered by the farmer's protests for such a long time.

We talk of democracy, we have Parliament function right now, and yet no one, the very bulk of the body politic is assembled in Delhi, the capital and we never heard a word that on the opening day of Parliament the Prime Minister is shouted down and the subjects talked about are also not remotely connected with any issues of such urgency, the MPs in both houses didn't allow the PM to make his statements and the talks were about some foreign spy agency trying to interfere in India's security issues with a foreign spy agency trying to probe into Indian affairs.

We are not sure how many Indian readers would have read through the morning newspapers or scanning through such remote issues. What remained in one's memory, we imagine the unruly demands to ask for Home Minister's change or the least of the courtesies extended to the country chief executive, the Hon'ble Prime Minister.

The monsoons have been plenty and the kharif season is in full swing yet the news reports are such that the kharif sowing lags the targets and as in mid-July that the area covered by this time was below target, it is only 6.1 million hectares instead of the expected 6.9 million hectares! Thank God only one mainstream daily reported on the front page when the whole nation is not worried about how democracy is functioning in the country. Even when we are imagining the rainfall was more than in excess, seeing the rainstorm was so threatening and almost flooded the city so completely.

Now, turning to the main issue that we have to take agriculture sector always very seriously only. Someone or others keep reminding the indifferent and also corrupt politicians all the time about how we look at the sector that had shaped and kept India and the Indians. At the mercy of the elements, we like to draw the attention of all Indians to the pictures of the Indian people at various historic times after at least the art of photography came into use.

There are even now many such albums that are featured in such devices as Youtube. There is one such large picture of the years in the 1870s where one large family stands in such one photo that must devastate you, if not simply shake you out of your very bearings.

In fact, we need a separate department of the sociology of Indian agriculture and Indian villages in some select universities and socialist research institutes. After all, our agriculture is such a very high priority area and so there is a new perspective to our agriculture. And we have to create such a new perspective and it is the demand of the times, we feel even our agri universities need to imagine such a new perspective, the time for which has come and the government must turn its attention to such an approach.

There are very many issues for debate and discussion in any agricultural reform topic. One is new innovations in agriculture. Of course, there is no other agri institute than the famed Netherlands's own Wageningen University and Research (WUR), located 50 miles South East of Amsterdam.

Why this university is not studied in some depth by the Indian agriculture policymakers?

This university has some of the most daring innovations and slogans, goals, and targets. Agri study centers must warmly adopt the WUR has made a slogan: Twice as much food using half as many resources! They have demonstrated this target already in many of their crops. The Dutch have also shown that water for some of the crops can be reduced as much as 90 percent. The campus is dotted with a sea of greenhouses surrounding farmers' homes. Climate-controlled farms such as these have enabled farmers to produce record outputs. Some of the greenhouses are so large that in all, the greenhouses area cover an unprecedented 175 acres. Day and night have merged and the Dutch are the world leaders in vegetable seed exporters and also the fair-weather fruit, tomatoes!

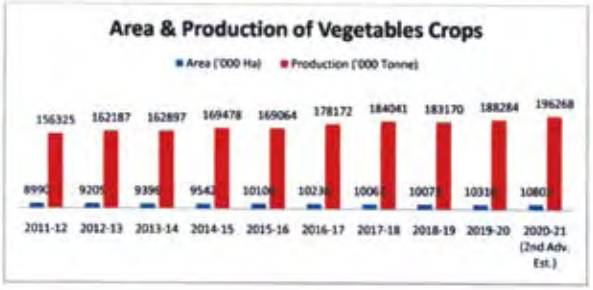
More than a third of the world's vegetable seed exports originate from the university's high-tech broiler households up to 150,000 birds, from hatching to harvesting.

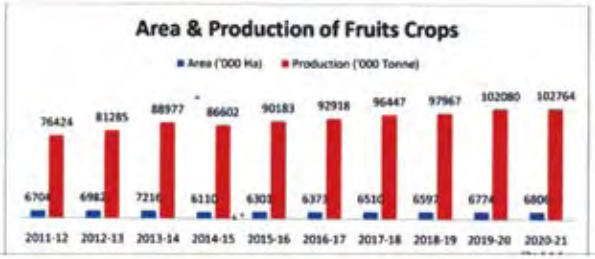
Horticulture output reaches all-time high of 330 MT, acreage and production growing consistently

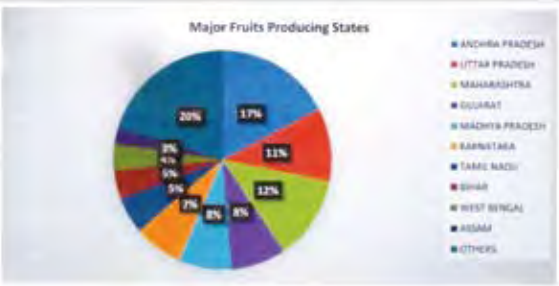
India's horticulture production in the pandemic-hit 2020-21 is estimated to be an all-time high of around 330 million tonnes which is nearly 3% higher than the output in 2019-20, keeping pace with the consistently growing preference of consumers for fruits and vegetables.

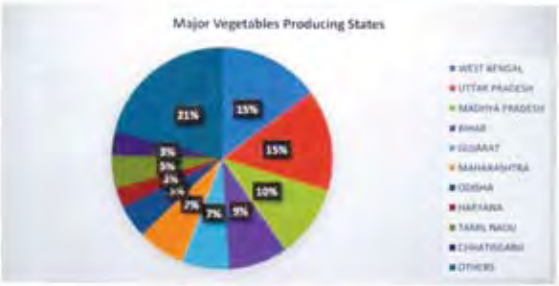
Analysis of past data shows a trend where farmers keep on increasing acreage of horticulture crops, resulting in higher outputs backed by use of high-yielding varieties of seeds and better farming techniques.

The latest data, released on Thursday as part of agriculture ministry's second estimate of horticulture output for the crop year 2020-21 (July-June cycle), shows that the country has registered increase in production over previous year in all categories of horticulture crops – fruits, vegetables, spices, plantation (such as coconut, cocoa, areca-nut and cashew nut), and aromatics & medicinal plants – except flowers. Among vegetables, all three most popular kitchen staples – tomato, onion and potato (TOP) – have registered an increase in 2020-21 compared to 2019-20.









While Andhra Pradesh, Uttar Pradesh and Maharashtra turned out to be the top three states in producing fruits in 2020-21, the credit of producing vegetables went to West Bengal, Uttar Pradesh and Madhya Pradesh as the top three states. Uttar Pradesh, however, emerged as the top producer with 13% of total production of all horticulture crops put together.

Sharing the highest horticulture output estimate data, agriculture minister Narendra Singh Tomar attributed the increase in production to the "government's farmer-friendly policies, tireless efforts of farmers and research of scientists".

Earlier in May, the ministry had pegged the estimated output at around 327 million tonnes (MT). It has now, however, revised it to 330 MT by factoring in updated production data from states and other government agencies.

According to the updated output data, production of fruits is estimated to be 102.76 MT this year as compared to 102.08 MT in 2019-20 whereas the production of vegetables is estimated to be 196.27 MT (growth of over 4%) as compared to 188.28 MT tonnes in the previous year.

The production of onion, which invariably faces high price fluctuation leading to major concerns among consumers, is, however, reported a minor increase -- from 26.09 MT in 2019-20 to 26.92 MT in 2020-21. Potato production, on the other hand, is increased by over 10% -- from 48.56 MT in 2019-20 to 53.69 MT in 2020-21.

Source : timesofindia.indiatimes.com

INDIA
is now in the category of world's top agricultural exporters

Backed by the stupendous streak of reforms, India has entered the top 10 list of the countries exporting agricultural produce in the year 2019 with a sizable share in the export of rice, cotton, soya beans and meat.

As per a report by World Trade Organization (WTO) on the trends in world agricultural trade in the past 25 years, India and Mexico with 3.1% and 3.4% share in global Agri exports, respectively, replaced New Zealand (9th) and Malaysia (7th) as the largest exporters across the globe.

The United States of America (USA), which topped the list in 1995 with 22.2% share of world Agri export, was overtaken by the European Union (EU) in 2019 with 16.1% global Agri share. The USA's exports reduced to 13.8% in 2019 while Brazil maintained its ranking as the third-largest exporter by increasing its share from 4.8% in 1995 to 7.8% in 2019.

Applauding the achievement, former Union Health Minister Dr. Harsh Vardhan took to Twitter and said, " Despite the pandemic, India stepped in to meet increased demand & emerged as a significant global supplier of food & other essential agricultural products."

Notably, the top exporting nations of rice in 1995 were Thailand (38%), India (26%), and the US (19%). In 2019, India with a lead of 33% overtook Thailand (20%) to top the list, while Vietnam (12%) overtook the US and climbed to the third spot. The top 10 exporters accounted for more than 96% of exports in both 1995 and 2019.

Further, India is also the third-largest cotton exporter (7.6%), and the fourth-largest importer (10%) in 2019. In the largest traded Agri product, soya beans, India (0.1%) has a meagre share, but was ranked ninth in the world. In the "meat and edible meat offal" category, India secured 8th rank in the world with a global share of 4%.

India's share of foreign value-added content in its Agri exports clocked 3.8% share primarily due to high tariffs on Agri imports to boost the domestic markets and local farmers.

According to a report, "Reforms to promote Agri exports" released in the first half of this year, the commerce ministry of India had mentioned that the government's consistent and concerted endeavors to bring in reforms to boost agricultural exports have been highly fruitful.

"Despite COVID-19, India has been able to step in to meet the increased global demand, emerging as a significant global supplier of food and other essential agricultural products," the report added.

Source : newsonair.com

Tractorisation in India high, but agriculture mechanisation low

Farmers in India have limited access to modern machinery. Many farmers still rely on traditional farming techniques. Technological interventions in farming can usher massive changes.

The tractor industry in India registered an increase in sales by more than 40 percent in 2020 as compared to 2019. And to all of our surprises, this was recorded when we were hit by a global pandemic and all the other segments were performing poorly. In fact, 2020-21 has been dynamic for this sector as the tractor industry witnessed the highest ever sale of about 9 lakh units. Now while these numbers are a good sign of tractor penetration in India, only 'tractorisation' is not agriculture mechanisation. In fact, mechanisation in agriculture is very low in our country.

While tractors are an integral part of farm mechanisation, they are not the only machinery that can assist in agricultural operations. Many Indian farmers, however, are solely dependent on tractors and perform other farm activities such as spraying and harvesting manually or with the help of farm labour. On top of that, micro surveys reveal that tractors are not even being used very efficiently. Their use in many parts of the country ranges between 500-600 hours per year as compared to a benchmark figure of 800-1000 hours for better utilisation.

Farm machinery such as laser levelers, field cultivators, mowers, combine harvesters, sprayers, backhoes, etc. should also be made available to the farmers to increase farm productivity. Farmers in India have limited access to modern machinery. Many farmers still rely on traditional farming techniques. Technological interventions in farming can usher massive changes. According to a report by the Indian Council of Agricultural Research, climate change could reduce agricultural yields by up to 9 percent. If that were to be true, farmers would be harshly affected by it. However, with climate-resilient technologies, farmers can make informed choices with respect to their farming practices and thereby avoiding climate-change shocks. India has approximately 13 crore farmers of all kinds - small, medium, marginal, large. However, only a very less percentage of this big number is aware of the vast possibilities that they can tap on with the help of digitalisation. Digital transformation in this sector is bound to make the farmers more resilient against the major possible challenges in terms of access to information, weather predictions, soil fertility, and better cropping patterns, etc.

The need of the hour is to provide farm equipment on pay per use basis. Since most of the farmers cannot afford to buy expensive machinery on their own and usually end up getting trapped in debts as a result of buying/loaning costly equipment, there should be a means by which they do not suffer from such extreme losses. 'Uberising the farm services' can help in solving India's farm crisis as more and more equipment are made affordable and accessible to the farmers on pay per use model. By allowing farmers to rent out their assets, farmers can pay off the purchase cost and even generate more revenue. Providing farmers with such lucrative choices is all the more important now due to the uncertain pandemic shocks that may affect them.

When COVID-19 hit us last year, agriculture was the only sector to have reported a positive growth of 3.4 percent at constant prices in 2020-21. While the Indian economy contracted by 6.5 percent, on the whole, the farm sector expanded. Recent data suggests that India's agriculture exports also jumped from 17.34 percent to $41.25 billion in FY21. What proved beneficial for this sector was the exemption from the nationwide lockdown and good monsoon. This also proves the massive potential of this sector. However, as the rural areas are affected due to the second COVID wave this time, the situation has changed and farm-related activities may not go unhindered.

In perspective, while our agricultural exports soared to a six-year high of over $19 billion in 2020-21, we still have challenges that need to be addressed. The pandemic has opened opportunities in agriculture in India, which, if recognized early can help in doubling the farmers' income. Many experts believe that India's economic recovery would be V-shaped and agriculture would play a prominent role.

In order to double farmers' income and increase productivity, farmers need cost-effective technologies available to them. A tractor is one of the many farming machinery that can be deployed. The use of sensors, drones, GPS technology, robots, etc. can make the lives of farmers easy. Since India has now improved remarkably in its digital connectivity, farmers can also use this high-end equipment with the help of private players, government, or farmer producer organizations. Only when at least a considerable percentage of farmers begin putting in service various kinds of farming equipment other than a tractor on their farmland, can we successfully declare that there is high agriculture mechanisation in India.

Source : www.cnbctv18.com

Online Meetings @

www.agricultureinformation.com

Upcoming events

AUGUST 9, 2021

3:00 pm
Dr. Pankaj Sharma on "Constraints for sunflower production in India"

05.00 PM
Dr. Virendra Pratap Singh on "Integrated weed management in major kharif crops"

AUGUST 10, 2021

3.00 PM
Mr. Lucky Agrawal & Mr. Mayur Chumbalkar on "Cashew nuts processing in detail"

5.00 PM
Mr. Rahul Paharia on "How to setup mango processing plant"

AUGUST 11, 2021

3:00 pm
Mr. Tejas Joshi on "Selection of different product processing machinery"

05.00 PM
Dr. Neeharika Kanth on "In Vitro grafting in fruit crops"

AUGUST 12, 2021

3:00 pm
Mr. Yogesh Rajkumar on "Importance of international marketing in agriculture sector"

05.00 PM
Mr. Sushil Kumar Choudhury on "How to set-up rice mill and its economics"

AUGUST 13, 2021
3:00 pm
Mr. Rajender Kumar on "Sweet pepper – A profitable greenhouse crop"

05.00 PM
Dr. P. Venkataravana on "Modern cultivation practices in groundnut"

AUGUST 16, 2021
3:00 pm
Dr. Sharanakumar A Biradar on "What is Agrostology ? (Forage and Pasture) and Integrated Farming System"s"

05.00 PM
Mr. Kulkarni HB on "Organic Food FPO's challenges and opportunities in Madhya Pradesh"

AUGUST 17, 2021
3:00 pm
Ms. Monika Shukla on "Management of Saline Vertisols – for be8er crop production"

5:00 pm
Mr. Pavan Muddanna on "Zero Budget Natural Farming Methods (ZBNF)"

AUGUST 18, 2021
3:00 pm
Dr. Devarajareddy NJ on "How to rejuvenate bore wells in agricultural farms / bore well recharge in simple way"

05.00 PM
Mr. Shivakumar Swamy on "My 20 years experience : How to do organic agriculture/horticulture with too li(le water "

AUGUST 19, 2021
3:00 pm
Dr. Venkata Sameer Kumar on "How to make a higher yield in pulses?"

AUGUST 20, 2021
3:00 pm
Mr. Palaniswamy on "About rice mill industry: Rice processing methods"

05.00 PM
Mr. Nintin Singhal on "Value added products of neem"

AUGUST 23, 2021
3:00 pm
Dr. A. Amarender Reddy on "Schemes for value addition and food processing industry development"

05.00 PM
Ms. Simmi Ranjan Kumar on "Value addition of underutilized crops such as millets and legumes"

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Recently Completed Meetings

Dr. Priya P. on "Methods of composting"
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.

Dr. Sushant Shekhar on "Mushroom value added products"
Dr. Sushant Shekhar is the Founder & Director of Jayaa Agro Foods in Deoghar, Jharkhand. His interests are mushroom cultivation , manufacturing and value addition. To know more view https://bit.ly/39wZtiQ

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.

Dr. V. Vani on "Processing and value addition of jack fruit"
Dr. V. Vani is the Assistant Professor at Horticultural College and Research Institute in Periyakulam, Tamilnadu. Her interests are Food processing and preservation; Nutrition; Post harvest technology of fruit & vegetables and Quality control of processed products.

Mr. V. P. Senthil Kumar on "Nutrient, pest & disease management in banana"
Mr. V. P. Senthil Kumar is the Director – Marketing & Technical of Jayasree Biotech in Hosur, Tamilnadu. His interest is tissue culture banana. To know more view https://bit.ly/3AS4grU

Dr. Bikash Ghosh on "Improved methods of cultivation of litchi"
Dr. Bikash Ghosh is a Retired Professor at Bidan Chandra Krishi Viswavidyalaya in Mohanpur, Nadia District in Bidan, West Bengal.

Mr. Gorityala Vidyasagar on "Climate Smart Agriculture – How to solve the challenges arise from the climate changes"
Mr. Gorityala Vidyasagar is the Assistant Director of Agriculture at Department of Agriculture, Govt. of Telangana, Hyderabad , Telagana. To know more view https://bit.ly/3yt9Cba

Prof.(Dr) R P Singh Ratan on "Support and value chain management for sustainable food systems"
Prof.(Dr) R P Singh Ratan is the Dean (Agriculture) at Jharkhand Rai University in Ranchi, Jharkhand . His interest is Agricultural Extension Services.

Ms. Anjali Choudhary on "Growing own food in urban homes"
Ms. Anjali Choudhary is an Research Assistant at Indian Institute of Management in Ahmedabad, Gujarat. To know more view https://bit.ly/367ZGYy

Ms. Sapna Nigam on "Artificial Intelligence in Agriculture – To solve number of challenges and optimize production"
Ms. Sapna Nigam is a Scientist at ICAR-Indian Agricultural Statistics Research Institute in New Delhi. To know more view https://bit.ly/2UhuNhM

Shri. Mahendra M Manivaasan on "Why Organic farming is not successful?"
Shri. Mahendra M Manivaasan is the Founder Chairman and Managing Director of WEFSA Farmers Producer Company Ltd., Perambalur, Tamil Nadu. To know more view https://bit.ly/3qWcytj

Mr. R.R.Baskaran on "Agricultural products, consumable products: Differences among them"
Mr. R.R.Baskaran is the Managing Director of Nerkkalanjiam Collective Farming Farmer Producer's Company Limited in Kumbakonam, Tamilnadu. His interest is making agriculture ecological and poison free in a sustainable way.

Dr. S Varadharaj on "Profitable Moringa and its value added products: A case study"
Dr. S Varadharaj is an Associate Professor , Dept of Social Sciences at Tamilnadu Agricultural University,Horticultural College and Research Institute in Theni, Tamilnadu. His interest is moringa crop.

Ms. Kshitiz Srivastava on "Vegetable farming - Management of root knot nematodes"
Ms. Kshitiz Srivastava is a Research Scholar at Odisha University of Agriculture and Technology in Patna, Bihar. Her interest is plant production. To know more view https://bit.ly/3d8Vlbv

Mr. P.K.Unnikrishnan Nair on " Innovative technology for coir pith processing"
Mr. P. K. Unnikrishnan Nair is an Engineering Scientist at Truman Enterprises in Coimbatore, Tamilnadu. He says coir pith is the by product obtained after the extraction of fiber from coconut husk. Four years of research with the collaboration of Tamil Nadu Agricultural University, Coimbatore, has gone into inventing innovative technology to process coir pith and husk along with the design and fabrication of suitable machines. This technology is first time in India may be probably globally has multiple benefits and beneficiaries and solution to a lot of problems faced by the industry for the past more than two decades.

Dr. Mam Singh on "Plug plant production in ornamental and flower crops"

Dr. Mam Singh is the Principal Scientist at ICAR- Indian Agricultural Research Institute in New Delhi. Plug plants are seedlings which have been germinated and grown in trays of small cells. When the roots have grown sufficiently they can be easily pushed out of the trays and either transplanted into larger pots or planted outside in the ground.

Mr. Lakshmikanth on "Growing tissue culture banana plants"

Mr. Lakshmikanth is the Proprietor of Vigneshwara Biotech in Bengaluru, Karnataka. His interest is growing tissue culture banana G-9 & yelakki plants. To know more view https://bit.ly/3wQ2y8b

Mr. N.Narasimha Reddy on "My experience in tomato cultivation including sorting, grading, packing, transporting and marketing"

Mr. N. Narasimha Reddy is the CEO of Shri Amaranarayana Horticulture Farmer Producer Company Limited in Chintamani, Karnataka. To know more view https://bit.ly/2SSi9oY

Dr. Chandra Kiran Sant on "Opportunities and Challenges in Indian Dairy Sector"

Dr. Chandra Kiran Sant is the Dairy Advisor at Livestock Management Centre in Mumbai, Maharashtra. He is also associated with 1) Gomati Cooperative Milk Producers Union, Tripura as Expert Dairy Development for improving the milk quality & quantity as well as oversee installation of 40000 LPD Dairy Processing Plant.....

Dr. Rajeshnallaiah on "How to increase soil fertility and reduce input cost"

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

Mr. Thillaikannan Veeraragavan on "Sugarcane development with mechanization to overcome labour problems"

Mr. Thillaikannan Veeraragavan is the Manager, Agriculture at Kiryandongo Sugars Ltd., in Kigumba, Kiryandongo District,Uganda. His interest is farm mechanization.

Dr. Geetha P.N. on "What is sustainable agriculture? What are the different types of sustainable farming methods?"

Dr. Geetha P.N. is the Director(India Operation) at World Alliance for Planetary Health – USA in Cochin, Kerala. Her interest is sustainable agriculture. To know more view https://bit.ly/3wtkTYn

Mr. Samiran Patra on "Business opportunities in seed production of pabda and koi"

Mr. Samiran Patra is the Subject Matter Specialist, Fishery Science at Murshidabad KVK, West Bengal University of Animal and Fishery Sciences in Jiaganj, Murshidabad District, West Bengal. To know more view https://bit.ly/2SyrD8A

Dr. PK Shrivastava on "How to establish a dairy business successfully"

Dr. PK Shrivastava is a Dairy Business Consultant at M/s. Dairy Consultancy India in Bengaluru, Karnataka. To know more view https://bit.ly/2Sj19bn

Ms. Joanna Kane-Potaka on "Opportunities for millets cultivation and value addition"

Ms. Joanna Kane-Potaka is the Assistant Director General (External Relations) & Executive Director, Smart Food at International Crops Research Center of the Semi-Arid Tropics (ICRISAT) in Hyderabad, Telagana. To know more https://bit.ly/3iery2F https://bit.ly/2SchEpA

Dr. Lachhman Das Singla on "Early and accurate diagnosis of parasites in proper management of dairy "

Dr. Lachhman Das Singla is the Director, Human Resource Management cum Professor and Head Veterinary Parasitology in Guru Angad Dev Veterinary and Animal Sciences University in Ludhiana, Punjab. To know more view https://bit.ly/3z91tdd

Dr. Rajiv Kumar Agrawal on "Hydroponic fodder production"

Dr. Rajiv Kumar Agrawal is the Principal Scientist at ICAR- Indian Grassland and Fodder Research Institute in Jhansi, Uttar Pradesh. His interest is hydroponics. Low productivity of livestock is a matter of concern which is usually attributed to poor fodder and feed resources over the seasons and regions as well as unproductive animal breeds.

Dr H.C. Gena on "Wasteland development through afforestation "

Dr H.C. Gena is the Chief Project Manager at Indian Farm Forestry Development Co-operative Limited(IFFDC) in Gurgaon, Haryana. Indian Farm Forestry Development Cooperative (IFFDC) is a Multi-state Cooperative working in the field of Natural resources management particularly developing wastelands & marginalized lands through afforestation by promoting Primary Farm Forestry Cooperative Societies in Uttar Pradesh, Madhya Pradesh, Rajasthan and Uttarakhand States.

Dr. Veerangouda M on "Farm mechanization & advanced technology for achieving success in farming"

Dr. Veerangouda M is the Dean(Ag.Engg.) at College of Agricultural Engineering, UAS in Raichur, Karnataka. To know more view https://bit.ly/3iwrNrX

Dr. Kanchan Nainwal on "Organic farming: Opportunities and challenges"

Dr. Kanchan Nainwal is the Associate Director, Agronomy at Govind Ballabh Pant University of Agriculture & Technology (GBPUAT) in Pantnagar, Uttarakhand. To know more view https://bit.ly/2Rz3f6t

Dr. Udai Bhan Singh on "How to establish new orchard & high tech nursery"

Dr. Udai Bhan Singh is the Dean at College of Agriculture, Bharatpur, Rajasthan. His interest is establishment of orchard and high-tech nursery. To know more view https://bit.ly/3gjFxDn

Dr. Basavaprabhu L. Patil on "Cutting edge technologies for the management of viral diseases in crops"

Dr. Basavaprabhu L. Patil is the Principal Scientist at ICAR-Indian Institute of Horticultural Research, Bengaluru, Karnataka. His interest are viral diseases of plants and their management. He says plant viral diseases cause serious crop damages and yield losses across the world and hence posing a huge risk to the food security. Almost every economically important crop plants are affected by viral diseases, against which there are no formulations for treating these viral diseases, unlike the fungicides against fungi and the bactericides against bacteria. To know more view https://bit.ly/3wQ2y8b

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TALKING TO

Arnab Vohra

Managing Director
Urban Growers LLP, New Delhi

Mr Arnab Vohra is the Managing Director of Urban Growers LLP, New Delhi. The company was established in 2017 and provides expert turnkey solution for fresh Fruits & Vegetables. They are further expanding into various allied verticals such as retail, wholesale, processing, and exports. They have tie-ups with farmers and FPOs throughout the country.

We had our own indoor mushroom growing facility in Okhla in New Delhi where we were growing 3 varieties of mushrooms in an area of 1800 sq ft under controlled environment . We soon started our second facility near Rohini to grow fresh oyster mushrooms. We soon began outsourcing production of button mushroom and started working with farmers through mandis. We observed that the farmers were charged commission and labour handling as a result the product was costly and of low quality.

We started purchasing button mushrooms from suppliers from Sonipat belt. and started supplying to Chennai and Odisha in particular. These two states in particular showed good demand for button mushrooms. We deliver by railways in ice box packing of 18 kgs each containing 9kg ice. About 50 tons are being supplied to these states on a monthly basis. We soon expanded our product line by including fresh fruits and vegetables for export purpose and decided to explore that vertical.

Exports: Currently we are handling about 15 SKUs in our product portfolio. We procure our produce directly from the farmers. We have tie-ups with cold storage and packing facilities where produce is packed and loaded in the containers. We are purchasing from farmers and FPOs in the country. We provide farm to container stuffing services to the exporters, that is right from farm procurement to domestic transportation to pack houses, where the company does packing, sorting, grading, strapping, and container stuffing. This service is availed by existing and new exporters.

The established exporters have the advantage of just managing the process and exporting as they have a strong buying network with the exporting countries. For the new exporters, we make it easy by doing all the ground work required. The execution time to stuff the container by sea is 3 days and 24 hours by air, which is the lowest in the country.

So far, we have successfully executed 200 tons of export orders within 18 months of starting this service. We have tie-ups with domestic cold storages in Maharashtra , and we are actively looking for such tie-ups in Gujarat, South India, and Northeast India. It is important to localise cold storage to curtail transit time and avoid quality deterioration.

We have innovated the redundant process of exporting perishables by packing the produce on the farm itself, stuffing in the container, transporting by railways to the port, and then shipping it off. It has helped us to avoid doubling of logistics, labour and resulted in significant reduction of time and improved the quality of product as there is no pilferage and lags in supply.

Wholesale: We are working with distributors, wholesalers, and institutional buyers, and are on the look out for new alliances and customers. The produce that lands in Mandis does not have source of origin certificate or date of harvesting certificate. Nobody knows when it was harvested, how transportation took place, its shelf life and this results in quality degradation. Consumer awareness has increased, especially after this pandemic, people have become more health conscious and particular regarding the fruits and vegetables they consume.

The third vertical is retail. We were supplying certified organic products to companies like Big Bazaar in New Delhi. The pilot project was started last year. We felt a robust supply chain is needed to supply certified organic products to our clients. We are supplying 20 SQA certified organic products and high quality non-organic products directly procured from the farms. We have very attractive packaging made of biodegradable material which is shelf-friendly, and presentable. We are willing to share the details with anyone who is interested in buying.

The fourth vertical is processing. When the lockdown came into force, the entire system was shaken up. Traditional movement of fruits and vegetables was disrupted.During that time we tied up with farmers in UP and supplied 150 tons of green chillies to processing units. In processing, we buy straight from farmers, and with the help of district horticulture officers and our team, we were able to identify surplus production clusters. This helped us keep the price in check. When there is surplus