

## FOREWORD

Doon Business School, Dehradun (DBS) is one of the premier institutions in the field of education (Management and Agricultural Science) in northern India with the primary objective to impart an education that not just creates erudite employees/ managers but to create leaders who are going to leave a lasting imprint on the business, agriculture as well as social sector. DBS is equipped with state-of-the-art educational and training facilities, supervised and coordinated by highly intellectual faculty who have served various institutions of repute.

The agribusiness and Agriculture department of DBS wishes to connect with the corporate world through its newsletter DBS Agri-Samvaad where students can exhibit their learning engagements. The initiative has been taken to showcase the activities of DBS students in the practical learning on emerging agri issues and opportunities, industry initiatives, and government policies through article writing, opinion, reviews, etc. I wish the letter will play a significant role in the overall development of students learning process at DBS Dehradun and also inform the industry about the Agri-education of the institute. DBS would be happy to hear from corporate houses on the latest updates in their respective sector.



Prof. (Dr) I J Gulati  
Principal DBS Dehradun  
Retd. Professor, Dean & Faculty Chairman  
Rajasthan Agriculture University, Bikaner, (RJ.)

## In the Newsletter



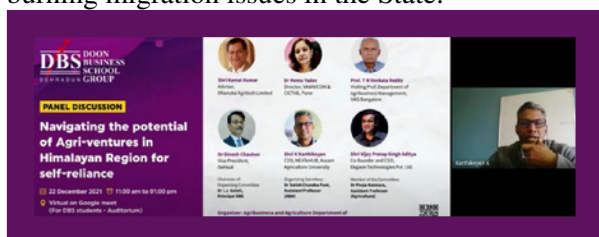
- *Panel Discussion on “Navigating the potential of Agri ventures in Himalayan Region for self-reliance”*
- *Students Visit at Abhinav Dairy Farm, Dehradun*
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### Panel Discussion on

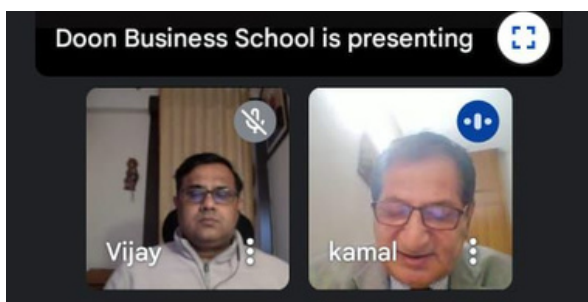
### *“Navigating the potential of Agri ventures in Himalayan Region for self-reliance”*

Doon Business School Dehradun had organized a virtual Panel Discussion on “Navigating the potential of Agri ventures in Himalayan Region for self-reliance” on 22 December 2021. Eminent speakers were invited to the event to discuss the potential of Agribusiness and Agri entrepreneurship in the mountainous region of the country. The discussion was chaired by Shri Kamal Kumar Advisor, Dhanuka Agritech Limited (a pioneer Agrochemical industry in the country). The deliberations were started by Prof. T N Venkata Reddy, Visiting Professor University of Agriculture Sciences Bangalore.

The speaker has discussed the opportunities in various Agri and allied areas such as the production and marketing of cut flowers, apples, kiwi, ginger, turmeric, and medicinal & aromatic plants. He further emphasized on catering the need of consumers in organic production with a special focus on farmers' collective. Next panelist Dr. Dinesh Chauhan, Vice President DeHaat has suggested that the involvement of agri-venture in production and marketing of niche crops and original crops with value addition can reverse the burning migration issues in the State.



Dr. Hema Yadav, Director Vaikunth Mehta National Institute of Cooperative Management, Pune has discussed the benefit of cooperatives for building the models of self-reliance in the State followed by deliberation of Dr. Sagar Wadker, faculty of VAMNICOM Pune. In the deliberation, the next panelist Mr. K Karthikeyan, CEO of Northeast Agriculture Technology e HUB (NEAT eHUB Incubator), Assam has led the discussion on the challenges and the solutions in the area of agri- entrepreneurship. Moving forward Mr. Vijay Pratap Singh CEO of Ekgaon technologies has talked about the conducive business environment for Agri related businesses wherein nonagricultural agencies are also working for the development of agriculture. He proposed the decade as the Decade of Agriculture during the discussion.



Finally, the Chair of the meeting has concluded the discussion and suggested to the students of DBS for a better future in entrepreneurship.

## Students' Visit at Abhinav Dairy Farm A Journey of passion to profession

- Dinesh Kumar  
PGDM-ABM(2020-22)

Farming is a lucrative profession which is proven by Chaudhary Param Singh, founder of Abhinav Dairy Farm, Dehradun. ABM Students of DBS visited a modern high-tech Integrated dairy farm at Sahaspur Dehradun on 03-12-2021 and understood dairy operations and marketing.



During the visit, students understood the role of technology adaptation in farm operations which has empowered the farmer to fetch high profit using an integrated farming approach. The major activities of the farm are Dairy, Goetry, Poultry, Fishery Duckery, and Agricultural practices. The best part of the dairy is one activity is providing input to other activities and sustainable farm operations are being carried out at the farm since 2011. The owner understood the consumers' changing tastes and preferences and accordingly it has been producing fresh organic produce along with dairy products. Such models are the requirements and to be replicated among all the farmers, farmer clubs, and farm cooperatives across the country for longevity, productivity, and profitability in the farm operations.

## Possibility for Agro-tourism in Uttarakhand

**Mr Debpratim(B.Sc Ag 4th Year)**

**Dr Pooja Kaintura(Assistant Professor, DBS)**

India is the World's 2nd largest populated country where 85% of people depend upon agriculture for earning their livelihood. Even though the contribution from this sector in GDP is negligible (approx. 14% of total GDP) but its relevance is still exist as it is the largest livelihood provider. But in comparison to other sectors, agriculture sector is not that much recommendable or reasonable as it is actively and thickly diluted with culture. As farmers sometimes get low profit margin and they are quitting the sector and get involved in other sectors. So, in order to increase the contribution of the existing agriculture sector, additional activities are being encouraged by the Government and as a result agrotourism is a new concept.

Generally, tourism is a boosting factor of economy, and several countries are transforming their economies by developing their potential in tourism. Agrotourism is one of the forms of tourism which capitalizes the rural culture and agricultural activities as a tourist attraction. It provides an additional source of income and employment opportunities to the farmers. Agrotourism is unanimously considered as a key factor for local economic development, especially for rural areas. Uttarakhand is one of the Fastest growing states in India, with a vibrant Agriculture, Industry and Service Sector. The state's economic growth has been credited to the booming service sector wherein tourism has emerged as a major contributor. In Uttarakhand agriculture is a substantial contributor of State's GSDP (8.30%, FY:2019-20) and nearly 58% of the state's population is associated with agriculture. But the Contribution is constantly declining due to rural- urban migration.

Uttarakhand has a great potential for agrotourism, the most important motivation for small farmers for adopting agrotourism is enhancing income and livelihood opportunities and improving the quality of life. In 2020 Uttarakhand Government took initiatives to focus upon the Hill Districts of Uttarakhand where fruits fields deploying different methods. The State Department of Agriculture is also planning further development of the existing farms and orchards in the Himalayan state for tourism purpose. Out of total 13 districts of Uttarakhand, 9 are dominated by hilly terrain, three of them- Nainital, Haridwar, Dehradun are partially hilly while Udham Singh Nagar is totally plain area. Agrotourism is right now highly influenced by the Government to enhance the potential of the agriculture sector and also to motivate the farmers to invest their time, effort and labour in Agriculture and Agrotourism. The Community Development Programmes are also helping the Farmers to enhance the knowledge for the betterment of their life and also helping them for adopting Agrotourism. There are several cases of agrotourism which are helped by CDPs or made by entrepreneurs.

There have been recent trends of establishing homestays in Uttarakhand offering the Organic and natural farming experience against a backdrop of the scenic Himalayas. Agrotourism is based on the concept of responsible tourism which has possibilities of creating opportunities for livelihood thus providing a solution for the problem of migration from hills.

## Vertical Farming-Need of the Hour

**-MD Zishan siddiqui  
PGDM-ABM(2020-222)**

Our resources are finite, and concerns have been raised by the ever-growing population how do we secure food for all with finite resources, especially land and water?

Vertical farming is seen as a promising technique to meet the demand of a growing population which is estimated to cross 9 billion by the year 2050 and to reduce the pressure on the land and water resources. The technique of growing food not only saves our precious resources i.e. land and water but also provides opportunities to urban people to join hands with rural people for food security along with nutritional security for all. The arrival of vertical farming leads to the use of much less space and offers inventive solutions to feed mass in a quick span of time. The adoption of technology will provide fresh green vegetables throughout the year due to its controlled habitat.



This can be seen as in the case of **Urban Kisaan** (Vertical Farming Startup company)

Urban Kisaan builds a network of indoor vertical farms in India and grows pesticide-free produce using 95% less water and requiring less than 1% of the land needed for outdoor farms; thereby saving 2,16,000 liters of water per farm per month, ( farms area is Approx. 2,000 Sq Ft only). This 2000 Sifts farm is capable of growing the same yield as a 1.75-acre traditional outdoor farm, going from seed to harvest in just 30 days for its leafy green crops.

## FARMERS' DAY Celebration at DBS

On 23 December, on the occasion of farmer's day students of DBS visited Abhinav dairy farm to commemorate the birth anniversary of fifth Prime Minister of India Shri Chaudhary Charan Singh. On the occasion, Principal DBS Prof. (Dr.) Interject Gulati has addressed the students and progressive farmers on various activities carried out in the Abhinav farm such as dairy, poultry, goatery and fisheries.



During the visits lots of questions of students on the farm activities were addressed jointly by Principal DBS, faculty DBS and Farm officials. Dr Pooja Kantura and Dr Satish Pant were also present in the visit and facilitated the learning process of students of DBS.

## Application of AI: Future of Agriculture

- Renuka Chauhan  
PGDM-ABM (2021-22)

Artificial Intelligence (AI) is a technological advancement which enable farmers to improve inefficiencies in the farming practice such as improvement in quality, quantity & ensure faster go-to-market for crops. AI-based robots are being used for farm harvest, post-harvest losses, effective supply chain management, disease diagnostic, predictive analytics and effective management of agrochemicals and nutrients. In India, AI is in a nascent stage, several companies likes Ninjacart, Fazal, Dehaat, Cropping, Aiono and many more have started the use of AI in their operations which is benefiting all the stakeholders including farmers. Although AI is transforming agriculture and stimulating an agricultural revolution.



It is also helping farmers in getting more productivity and profitability from the limited land while using resources more sustainably. According to research of markets & markets spending on AI will grow from \$1 billion in 2020 to \$4 billion in 2026 with a CAGR of 25.5% which is a positive sign in the development of AI. In line with the uses of AI application, NITI Aayog (Government of India) came up with a National strategy for AI in India which is mainly focused on economic growth and social inclusion. Such policy level initiatives and acceptance of the technology by large number of corporate houses are welcome note in the developmental front.

### Smart Farming is a New Fashion

**-Syeda Ilimina Nasreen  
PGDM-ABM(2020-22)**

By 2050, the global projection is considered to reach 9.8 billion, with 68% of the population settled in urbanization and to meet the increasing dense population, the food production needs to be increased by 70%. Shifting to the new variant ways of growing - focusing on "SMART FARMING" known to be the future of agriculture. Combining all the challenges in today's era, about one third of all the food that we produce is wasted, and 1.6 billion tons of food is spoiled on the way to the market or expired or thrown out by the restaurants at the end of the day. About 600 million people suffer from food poisoning every year, having the contaminated food. Also, looking forward to the agriculture industry, it consumes 70% of freshwater, believed to be the largest consumer. Research and scholars have come up with more innovative technology, which can serve better with less water consumption under controlled environment farming. The trending concept of indoor vertical farming has shown much interest among the youth, with positive outputs and benefits. The focus is to grow more products instead of only leafy vegetables. The whole environment can be controlled using light and nutrients, concentrating on the improvement of taste and texture using AI technologies. The entire



It is a more creative way of weather or climate resilient farming, growing food 2 to 3 dimensionally in vertical racks. The benefit is predictability as everything is under control. 95% less water usage than field crops (90-99%), zero pesticides, less land usage. It follows the sustainably grown produce. Accessibility to fresh, healthy food to everyone. The technology of smart farming requires a lot of investment in the installation of LED lights for different crops of different power. In the coming years, they can focus on channelizing the sunlight directly into indoor farming instead of using LED, which will be natural and the reducing the cost also fulfilling the vital energy sources. The development of vertical farming in urbanization helps in shortening the agriculture supply chain, maintaining the nutrient values.

### Burning issue of Water crisis in Vidarbha and Marathwada

**-Hritviz Darshan Khare  
MBA (ABM) 2021-23**

Vidarbha and Marathwada are the two regions of Maharashtra witnessing acute water shortage every year, which, according to experts, is driving the farmers to suicide. The Government of Maharashtra and multiple civil societies have undertaken a range of initiatives to bring about a change in the situation however due to the increasing population the situation is getting worse year on year. According to the researchers, both natural and man-made reasons are responsible for this crisis.

Marathwada has 9 dams at present, in summer, when the water scarcity increases, then many dams dry up and a little amount of water i.e. approx. 25-30% of the total requirement carry with them. Similarly, in Vidarbha region only around 50% of water stocks are found in dams and reservoirs in summers. Some of the reasons for this are obvious due to evaporation caused by hot climate, high consumption of water in sugarcane cultivation which puts pressure on the water usage and these regions are in the verge of desertification today. Traditionally, spices and oilseed crops were cultivated in these regions which are drought resistant and suitable for arid regions, but now the shift in cultivation practices such as production of soybean, sugarcane and BT cotton have created hydrological disaster in the region.

The Maharashtra government, under the Maharashtra irrigation Act 1976 can ask people of any region to stop cultivating sugarcane, but not a single step is taken by the government in this direction. Thus, there is an urgent need of draught resistant production planning with creation of rainwater harvesting reservoirs, development and uses of draught resistant varieties of crops, capacity building programmer on strategies to adopt for such regions, shift in agricultural practices i.e. diversification to mitigate the risk of water crisis and of climate change.

### **Opinion**

#### **Fate of Farmers amid repeal of the three Farm Act**

**Dr. Satish Chandra Pant**  
Assistant Professor at DBS

On November 19, Prime Minister announced the withdrawal of the three farm laws which were passed in the Indian parliament in 2020, despite of the vision of Government to propel the agriculture sector beyond the boundaries of States and provide competitive market alternatives to existing APMC market. In the history of reforms, it was the year 2003 when first APMC Model Act was announced, and reforms were started after decades of green revolution in the agricultural marketing front.

Gradually, looking at the persisting challenges of the farmers in the agricultural marketing further in 2017 the model act was modified as Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act, 2017 and a separate act on contract farming was also enacted as the Contract Farming (Promotion and Facilitation) Model Act, 2018.

In 2018, a report on Doubling Farmers' Income by Dr Ashok Dalwai was in limelight and suggested to have provisions of open access of market for fair trade and commerce activities. Following the suggestions of the report along with experts advise, the Farmers' Produce Trade and Commerce (Promotion and Facilitation) ordinance followed by Act was came into force in the year 2020. Under the act, the wider definition of market or trade area was envisaged for creation of enormous opportunity for all the stakeholders to participate in a fair and transparent trade in an open competitive market. Similarly, contract farming arrangements to minimize the risk and uncertainties in the agriculture sector for small and marginal farmers were enacted under the Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services ordinance followed by the Act in order to mitigate the risk and provide an alternative marketing option to farmers wherein, they can utilize best practices, enable them with latest tech-support, stay relevant in the changing consumerism where quality food products are highly demanded specially in the export market.

Moreover, the third reform i.e. the Essential Commodities (Amendment) Act was enacted to eliminate the restrictions on holding of certain essential commodities. The aim of the amendment was to encourage the stakeholders to create postharvest infrastructure for value addition through investment in the warehouse, storage, and logistic infrastructure which could have attracted the investment in the Agri-food processing sector too. The move could have had potential to create opportunities in the infrastructure, processing and value addition for better employability and attractive investment opportunities.

Although, the country is self-sufficient in the production of fruit & vegetables and food grains but what about the remunerative prices to farmers. Why are they still struggling? The reason is inefficient post-harvest management for which infrastructure, technology, skill sets are required. These three laws could have been devised to address the post-harvest handling to minimize the losses through creation of technology enabled infrastructure which requires investment.

In conclusion, it's a No-Win situation for all the farmers and other stakeholders. The farmers from Punjab, Haryana and Western UP who mostly cultivate paddy and wheat are backed under social safety net i.e. MSP procurement by NAFED and FCI, thus fortified claiming remunerative prices for their produce. The Shanta Kumar Committee had already stated in its report in 2005 that only 6 percent of the farmers could be benefited by the MSP. What about the fate of farmers of various other States who place confidence in crop diversification?

## Awards and Recognition at DBS

Dr Satish Chandra Pant, Assistant Professor, DBS Dehradun conferred Best Paper Award (second rank) in a National Conference organized by Vakunth Mehta National Institute of Cooperative Management (VAMNICOM), Pune, Maharashtra in collaboration with Ministry of Corporate Affairs, Govt. of India in the month of December 2021.

He has presented a paper titled "Conceptual Framework for Developing FPO model under decentralized Agricultural Marketing System in India" jointly with Dr Sathyendra from MANAGE, Hyderabad and Dr Mahesh Kadam from CCS NIAM, Jaipur. DBS wish him a success in his professional and personal affairs.

## Suggestions and Feedback

We would be happy to hear suggestions and feedback (if any) on this issue. Feel free to contact at [dr.ijgulati@doonbusinessschool.com](mailto:dr.ijgulati@doonbusinessschool.com) or [satishpant@doonbusinessschool.com](mailto:satishpant@doonbusinessschool.com)

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