

SIXTEENTH ANNUAL CONVOCATION

February 06, 2021

CONVOCATION ADDRESS

Chief Guest



Padma Bhushan Shri Rajnikant Shroff

Chairman and Managing Director
UPL



Junagadh Agricultural University
Junagadh-362001
Gujarat

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Hon'ble the Governorshri of Gujarat & the Chancellor of Junagadh Agricultural University Shri Acharya Devvratji; Hon'ble Minister of Agriculture, Rural Development & Transport Shri R. C. Faldu; distinguished Vice-Chancellor of Junagadh Agricultural University Dr. V. P. Chovatia; Registrar Dr. P. M. Chauhan; Hon'ble Vice-Chancellors of SAUs of Gujarat; Members of the Board of Management and Academic Council, invited guests, learned faculty members, dear students, representatives of press & media, ladies and gentlemen!

I feel honoured to be present amongst this illustrious gathering that represents academia, policy makers and planners, esteemed guests; faculties, students and alumni of JAU, Junagadh, for the Sixteenth Annual Convocation of this young University. At the very outset, I convey my heartiest congratulations to all the students who have successfully completed their respective academic courses and earned degrees and awards for excellence. I also congratulate the learned faculties who worked diligently with students to impart quality education and to equip them with knowledge and necessary skills to serve the society with a human touch.

Agriculture, in Gujarat, engages 52 per cent of the total workforce and remains primary occupation for two third of population. Rainfed area of the state is about 6.6 mha and about 1.2 mha area is affected by varying degrees of salinity and alkalinity. Gujarat is the largest producer of castor, cotton, sesame, groundnut and spices in the country along with monopoly for crops like dates, Kesar mango, durum wheat, fennel, cumin and isabgul and above all for native breeds like *Kankrej* and *Gir* cows and *Jafarabadi*, *Mehsani* and *Bunni* buffaloes. With the longest coastline in the country and with a share of over 20 per cent, Gujarat is also the leading producer of marine fish in the country. During the last decade, Gujarat has witnessed an average agricultural growth of about 10.67 per cent as against the national average of 3.57 per cent. Nevertheless, this progress should not make us contented as the state agriculture is facing many challenges to achieve sustainable growth rate in future.

Water is one of the most critical inputs for Indian Agriculture, as India witness the highly uneven distribution of rainfall, it creates long dry periods which make agriculture vulnerable. Thus, in vast areas, development of irrigation facilities is must for crop production. The adoption of micro-irrigation projects has resulted in water saving, to increase yield and income enhancement at the farm level. In Gujarat state till 2018-19, adopted Micro Irrigation Systems (MIS) in a total area of 17.81 lakh ha.

The situation also necessitates the incorporation of risk management approach to the production system. Integrated Farming System (IFS) offers such a comprehensive tool. This approach views farming in a holistic manner, and deploys resource management strategy to achieve economic and sustained production, while preserving resource base and high level of environmental quality. Field-tested IFS models (crop-livestock-horti-forestry) relevant to the average farm holdings, focusing on small and marginal farmers for different agro-ecosystems, must be upscaled in a mission mode with assured market linkages and MSP. Formation of producer organizations should be promoted and the complete chain from farm to fork addressed. IFS models can take care of the diverse needs, nutritional security, livelihood enhancement and climate resilience.

Horticulture is emerging as a key contributor to agricultural development. Indian horticulture development has many phases of growth, characterized by pleasantry, a hobby in pre-independent India, which moved further to adopt innovations in the fifth phase of growth heralding Golden Revolution. Expanding horticulture demands knowledge, skills and technologies for growing plants intensively to achieve efficient, profitable and competitive horticultural industry. India, is always a 'Land of Spices', grows as many as 70 spices. They can be an additional crop in most cropping systems and can give the extra income and in most cases without extra expenditure. Hence, in doubling farmers income spices are expected to play a major role.

Under the conditions of agricultural production system obtaining in India, farming is faced with inefficient scales of operation due to small & marginal size of farms and high vulnerability due to climate related risks, which are being exacerbated because of climate change occurrences. Climate change has also become a reality in India. The increase in mean temperature by 0.3–0.6°C per decade since the 1860s across India indicates significant warming due to climate

change. In future, the extreme event like flood/drought, extremely cold/hot days, and change in the weather cycle will be witnessed. Therefore, future challenges will be more complex and demanding. Hence, the scientific community, policymakers and farmers have to reframe the conventional strategies and policies for the agriculture sector to strengthen our economy.

This is high-time for the agricultural varities to exploit the potential of the emerging new areas of specialization such as IPRs, WTO-related areas, techno-legal specialties of trade along with the cutting edge technologies such as Artificial Intelligence, automation, robotics and drones in agriculture, alternative sources of energy, protected cultivation, crop nutrition modeling, biosensors, genomics and biotechnology, nanotechnology, big data analytics etc. The precise application of agriculture inputs such as seed, fertilizer, water, insecticides/pesticides, etc., with the use of precision technology such as drones, robotics, sensors, remote sensing and GIS coupled with artificial intelligence will play a vital role in agriculture to increase the input use efficiency, reducing the cost of cultivation and conserving environment.

Out of total labours in India, the share of agricultural labours was 60% in 1991 which has been reduced to 52% at present and it is estimated that it will be remain only 25% in 2050. Labour shortage gets worse during peak seasons which ultimately results in increased cost of cultivation, reduction in production and increase the risk against climate. Farm mechanization has been helpful to bring about a significant improvement in agricultural productivity. The farm mechanization has the potential to attract and retain the migrating rural youth in agriculture. It also provides different streams of employment related to operating and maintenance of farm machines thus resulting in increased rural employment.

Post-production agricultural produce undergoes series of post-harvest unit operations before reaching consumers. There are losses in each operation and handling stage, which decreases the availability of food. Huge waste of food grains and horticulture crops is evident starting from harvest, post-harvest, transport, storage and up to consumer in India. More than 300 MMT of horticulture produce worth Rs.9000 crore are being wasted every year due to lack of proper handling.

Nanotechnology applications have the huge potential to change agricultural production by allowing better scientific management and conservation efforts to plant production. Nanotechnology provides a much better effective way of environment detection, sensing and bioremediation. It can enhance agricultural productivity by using: (i) Nanoporous zeolites for controlled release and efficient amount of water, fertilizer, etc., (ii) Nanocapsules for delivering of herbicide, vector and managing of pests, (iii) Nanosensors for detecting aquatic toxins and pests, (iv) Nanoscale biopolymers (proteins and carbohydrates) based nanoparticles with few properties such as the low impact on human health and the environment may be used in disinfection and recycling of heavy metals, (v) Nanostructured metals can be explored in decomposition of harmful organics at room temperature, (vi) Smart particles can be useful in effective environmental monitoring and purification processes, (vii) Nanoparticles as a novel photocatalyst and (viii) Waste water treatment.

Renewable energy sources - solar, wind and biomass are now second largest sources of energy generation next to thermal power which may be the first by 2022 with 1,75,000 MW as the goal set by the government. One side, burning of biomass in several parts of the country causing pollution problem on other side biomass could be the major sources of meeting energy needs of the rural sector, as it is available locally. The decentralized production of electricity using biomass is being attempted through the producer gas route, in addition to photovoltaic solar system for lifting water, lighting and energy for household appliances. It is estimated that more than 600 million tonnes of biomass are produced every year from various crop residues and agro-wastes of which about 50% can be used for energy generation. Besides about 27 million tonnes of municipal waste is also available which has the potential to be utilized for energy production.

The Government of India has launched the "Make in India" program and Hon'ble Prime Minister Shree Narendra Modi is trying to conveyance the foreign industries to manufacture their products in India. In this context, the emerging farm Implements & Machinery and Irrigation Technology industries in Gujarat and particularly in Saurashtra may collaborate with foreign manufactures to produce the quality products in our country. This will provide an opportunity for export of farm Implements & Machinery and Irrigation Technology

from the state as well as our farmers will also be benefited.

Both the fast-growing domestic market and the increasing acceptability of Indian food products in the international market support the commercialization of agriculture into agribusiness. India's conversion from an agrarian economy to the world's food factory entails significant investments and knowledge support, for this to happen agri-business professionals has an important role to play. Besides capital, realizing India's potential in agribusiness would require an in-depth understanding of the international farming practices, technologies, application of food safety norms, global market linkages coupled with a through appreciation of local knowledge and practices. Agri-business has evolved out of the new input-output matrix. Application of managerial concepts, models and strategies at both individual and institutional levels are concrete with set results.

The agri-business managers prepared by agri-business institute must be well suited for rural development and agribusiness management including retail management, rural banking, logistics and supply chain, micro-finance, commodity futures, etc.

The Indian Farm Reforms of 2020 refer to the agricultural bills collectively seek to provide farmers with multiple marketing channels and provide a legal framework for farmers to enter into pre-arranged contracts among other things. The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020 seek to facilitate barrier-free trade of farm produce outside the markets notified under the various state Agriculture Produce Market Committee (APMC) laws. The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020 define a framework for contract-farming. The Essential Commodities (Amendment) Act, 2020 removes stock limits on agricultural produce to enable merchants to directly purchase produce from farmers in large quantities in times of bumper harvests.

Information and communication technology (ICT) is developing and applying innovative ways to use ICTs in the rural domain, with a primary focus on agriculture. ICT in agriculture offers a wide range of solutions to some agricultural challenges. Being a more traditional space, the use and adoption of tech in the Agri space have been far behind the curve as compared to other sectors. The recent explosion in the use of smartphones in the rural areas has helped in Agri taking its first concrete steps towards technology adoption. Another

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factor that has kick-started technology penetration in Agri has been the meteoric rise in the number of startups in Agri space in the past couple of years. Both on the input side (pre-harvest) and the post-harvest side, several entrepreneurs have taken it upon themselves to solve the Agri crisis and modernize India's Agri processes. I am happy to learn that JAU students have set five start-ups recently. The convergence of mobile networks, broadband internet, cloud platforms, IoT, AI and open data has started the transformation in the Agri sector and all signs indicate a higher impact in near future. Soil Testing, Agri Inputs Access, Microfinancing, Crop Insurance and Market Linkage and Access are the key areas where technology can help in better way.

Livestock plays an important role in the Indian economy. About 20.5 million people depend upon livestock for their livelihood. Livestock contributed 16% to the income of small farm households as against an average of 14% for all rural households. Livestock provides livelihood to two-third of the rural community. It also provides employment to about 8.8% of the population in India. India has vast livestock resources. The livestock sector contributes 4.11% GDP and 25.6% of total Agriculture GDP. Coming to the domestic livestock breeds; Saurashtra is the native tract of world famous Gir cows, a most popular milch breed in India and abroad, Jaffarabadi buffaloes, known for its high fat content in milk, Zalawadi and Gohilwadi goat as well as Patanwadi, Dumba and Marwadi sheep which are life-line for nomadic shepherd communities of this area.

Gujarat with about 20% (1600 km) of the country's coastline, 33% of the continental shelf area (1,64,000 sq. km) and over 2,00,000 sq. km of EEZ ranks second among the maritime states in marine fish production. Apart from being a maritime state, it has rich inland and brackish water resources in the form of rivers, reservoirs, village ponds and vast stretches of marshy lands all along the coast.

We at UPL are premier global provider of total crop solutions designed to secure the world's long-term food supply. UPL products are spread in 150+ countries. UPL takes initiative to contribute to the harmonious and sustainable development of the society through all the business activities that we carry out in various countries across the globe. We recognize that business enterprises are economic organs of society that draw on various societal resources for its functioning and growth, It is our core belief therefore that a company's performance must be measured not only by its bottom line but also with respect to

the social contributions made by the company while achieving its financial goals.

Education is a basic human right pivotal to personal and societal development and so is an integral part of our CSR work. Under education, we work and support the promotion of education, including primary education, higher education and employment-oriented course especially among women, elderly, and the differently abled. UPL also works on empowering community with the knowledge, skills and self-confidence necessary to participate fully in the development process for promoting gender equality. We work on enhancing vocation skills especially among youths, women and the differently abled.

Agriculture Development in India is both, a source of livelihood and food security for a vast majority of vulnerable sections of society. A higher priority to agriculture is given under livelihood enhancement rural development projects to achieve the goals of reducing poverty and malnutrition as well as of inclusive growth. We adopted a framework of UPL Khedut Pragati Programme for our Agriculture development intervention and work on farmers Capacity building, Lab to land and Technology intervention.

Under nature conservation, we work on UPL Vasudha Project by nurturing and strengthening Eco and Environment club in schools, Tree Plantation, Species Conservation, Soil & Water Conservation etc. We are trying to providing better healthcare facilities by partially funding and running hospital, health projects, public health programmes. We also work on specific local area needs around our Factory locations.

The state agricultural universities are our main source of developing competent human resources that are so critical for the development of the agricultural sector. India has a vast Agriculture Education System, which consist more than 35,000 Faculty members and 1.65 lakh students. Presently, the advancement of digital technology has played an important role in all sectors of life including teaching-learning process. For the growth and development of agriculture in India, it is important to motivate and encourage the youth towards this sector. If meritorious students join the Agriculture Education, it will greatly help the Agriculture Universities to contribute more in development of Indian Agriculture.

Agricultural graduates are required to be equipped with professional capabilities to deal with the concerns of sustainable

development of agriculture. On the other hand, agricultural universities have still a long way to go for skill development and attitude building in students and in linking the agricultural education with entrepreneurship development and professionalism. Further, to give fillip to teaching and learning in the emerging themes of science and technology, faculty need continuous encouragement and assistance for further improvement in their competence. To do so, human resource need to be strengthened by exposing faculty and students to international environment of research and making agricultural education relevant and better responsive through building linkages with industries.

I am happy to learn that in the response present challenges of Covid-19, JAU have been working on strategic plans to implement online education. The Universities have to adopt hybrid educational models blending of traditional and online teaching and evaluation systems Post-Covid. At present, government of India, as an Agricultural University, has introduced the new education policy JAU should also take this challenge to implement new Education policy in the system. In the light of this, inter-disciplinary approach should be followed and the model of specialized university is not advisable for integrated and sustainable development of the farmers and agriculture education.

There is a quote *"If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people"*. Dear students, today you must introspect and find out what you were when you entered precincts of this University and what you are now? Together with academic education, you have to acquire wisdom and a sense of right and wrong. Your success is the result of your hard work, as well as the efforts of your professors and the sacrifices of your families. Through your education at JAU, you have enhanced your capabilities to serve fellow human beings. You indeed need to be legitimately rewarded for your academic excellence. I would like to conclude with a quote of Mahatma Gandhi who said, *"The best way to find yourself is to lose yourself in the service of others"*. I am sure that you will find your way and bring a good name to your alma mater.

I am so happy to share in the excitement of your graduation day. My best wishes to the graduates and Postgraduates of Junagadh Agricultural University for a successful and rewarding career.

JAI HIND!
JAI BHARAT!

