



SIXTH ANNUAL CONVOCATION



January 15, 2011

Convocation Address



Dr. M. M. Pandey

Deputy Director General (Engineering)
ICAR, New Delhi

JUNAGADH AGRICULTURAL UNIVERSITY
JUNAGADH - 362 001

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Her Excellency, the Governor of Gujarat and the Chancellor of Junagadh Agricultural University, Dr. Shrimati Kamla; Shri Dileep Sanghani, Hon'ble Minister of Agriculture, Co-operation, Animal Husbandry, Fisheries, Cow Breeding, Government of Gujarat; Dr. N. C. Patel, Hon'ble Vice Chancellor, Junagadh Agricultural University; Dr. R. L. Shiyani, Registrar, Junagadh Agricultural University; Vice Chancellors of various Agricultural Universities of Gujarat; Members, Board of Management; Deans of various faculties, University Officers; Members of Academic Council; invited dignitaries; faculty members, degree recipients, students of various faculties, representatives of the media, staff of Junagadh Agricultural University, ladies and gentlemen, I am honoured to be here before you on this important occasion.

I feel greatly privileged for the opportunity given to me by the university to address this august gathering on the Convocation Function of the Junagadh Agricultural University. I congratulate the students on being conferred with the richly deserved degrees and awards for their academic accomplishments. The faculty members of the JAU, who have

strived to impart quality education, knowledge, skills and human values deserve due appreciation on this important day. Convocation is an important occasion of the University and to the student community who will be rewarded for their perseverance and single-mindedness in obtaining the coveted degrees, which is a unique accomplishment in their lives. The time is also ripe to introspect on the course of journey we have undertaken, culminating in today's function. What are our achievements in the scientific and academic spheres? What have been our shortcomings? What are the lessons we can transfer to the posterity? How shall we use our knowledge to uplift and serve the downtrodden and less fortunate citizens?

This University has earned a high position among many agricultural universities in the country by its sincerity of purpose and the standard of education imparted to its students. I congratulate the Vice-Chancellor, his colleagues and also the students for this achievement.

All the students obtaining their degrees today deserve heartiest congratulations as it is a great moment of glory and fulfilment in one's lifetime. All of you would now be embarking on a new phase of life, seeking a career so as to be an active contributor to nation-building. This process of transition is a way of life and I am sure that the values, traditions and above all, a high level of integrity and morality

imparted by this university will stand you in good stead in the days to come. It would be up to you to find and seize upon opportunities which come before you and make the best use of it. I wish you all a very successful career ahead and a life of fulfilment, bringing more laurels to your alma mater and the state of Gujarat.

Leveraging knowledge for ushering in a new and secular nation, devoid of partisanship, despotism, abhorrent moral values, is a responsibility of every citizen. We may come across insurmountable problems in achieving our goals. But, as you are coming from the State which is the home of Mahatma Gandhi, the father of the nation and the Iron man, Sardar Vallabh Bhai Patel, their life should serve as the beacon light to guide you in the right path and overcome all impediments. Let us all join hands to transform our nation to one of world leadership in knowledge and economic prowess by taking along our less fortunate brethren.

Our education system has evolved over the years, yielding very successful accomplishments and bringing forth the creative genius of our own students who have helped change the world in many ways. India is now looked upon as an important global institutional hub for quality education. We have a sizeable number of universities and a large population of the student community who are constantly on

the move to various parts of the globe showcasing the prowess of our nation. It is, therefore, imperative that in addition to the quantity, we continue to set high standards for the quality of education and research in our Universities. I wish to make a few suggestions for the kind consideration of this august gathering.

- ❖ Develop high quality human resource to prepare the nation to be globally competitive, in every field including agriculture.
- ❖ Build up an environment in every University system for a systematic and inter-related approach in Science and Technology and public policy for overall development for the benefit of mankind.
- ❖ Break the barriers of geographic boundaries to bring innovative content generation and to spread the knowledge through the medium of virtual class rooms.
- ❖ Develop and implement cost effective and situation specific continuing education system for citizens in accordance with the needs of the nation and its sustainable development.
- ❖ Impart education with a human touch, keeping in mind the complex natural ecological balance and generation of

sustainable technologies for the optimal utilisation of limited resources such as soil, water, air and flora and fauna.

India's population during the last 35 years has increased from 551 million to 1.122 billion implying that the country has to feed two times the population now than it did in 1974-75. Food grain production has kept pace with the increase in population except for pulses and oilseeds; there has been an increase of four times in the production of food grains, six times in horticultural crops and milk, nine times in fish and 27 times in eggs. This has freed the country from the burden of utilizing its foreign exchange reserves for the importation of food grains. Higher production augurs well for improved nutritional security and scope for diversification. However, this increase in production has put a huge pressure on natural resources, raising important issue of sustainability of agriculture in future.

Sustainable agriculture has to take into account soil, water, bio-diversity, micro-climate of the area without over exploitation. However, over-exploitation of these resources have rendered vast stretches of land unsuitable for conventional farming methods leading to serious social and environmental concerns. We have to address these issues in a holistic manner. Enhancement of productivity of dryland

agriculture is an important area needing our attention to increase the crop production. Pulses and oilseeds both are generally grown in such areas. Over 60 % of our arable land is rainfed putting serious limitations on the productivity and cropping intensity. Solutions to the already identified constraints in such areas are yet to be found. We look upon the modern tools of bio-engineering to sustain and improve the productivity from these areas. Many water saving methods such as drip, micro sprinkler, rain water harvesting and farm pond development can pave the way for improved productivity from such areas. It is heartening to know that Gujarat has taken a lead in this area.

The situation on water availability in our country is also precarious. It has been projected that by 2050, 20% of the geographical area and 17% of the population would face severe or moderate water scarcity with availability falling to less than 500 m³ per capita per year. 70% of the area and 76% of the population would be on the verge of economic scarcity with water availability falling to less than 1000m³ per capita. Therefore 'business as usual' approach to water development and management is not tenable. Drastic changes in policies, governance, regulations and management would be needed on a scientific footing to address these challenges right now.

Fragmented land holdings, increased cost of inputs, limitations in the capacity of the farmer to invest, lack of proximity to market, non-availability of information on market forces, and reduced investment by the public sector have resulted in declining profitability and productivity. Both basic and applied research in agriculture is essential to sustain agricultural growth. The research findings should percolate to the lowest echelons of the farming sector to achieve the desired levels of growth in a sustainable manner. Similarly, an effective mechanism to obtain feedback is also needed to set priorities in the research and development programmes. These are some of the important steps needed to make agriculture an attractive vocation.

Precision and quality of farm operations are of equal relevance to achieve higher yields and reduce the cost of expensive inputs such as seeds and fertilizers. For example, sowing the required quantity of seeds at the correct depth and uniformity of application of fertilizers can only be possible with mechanical devices. The time taken to perform a sequence of operations is a crucial factor determining the cropping intensity. Thus, higher productivity of land and labour can be achieved with mechanization.

Despite limited level of processing, the food processing industry is one of the largest in the country. It ranks

fifth in the world in terms of production, consumption, exports and expected growth. The demand for processed foods is increasing rapidly. Several state governments and the Ministry of Food Processing Industries are providing tax relaxation and seed capital for establishing food processing units. Superior marketing mechanisms and storage and retailing facilities are needed to make these food processors successful.

Some of the frontier areas of research in agriculture are Climate Resilient Agriculture, Precision Farming, Protected Cultivation and Conservation Agriculture. Major engineering interventions are required in Bio-technology, Bio-informatics, Carbon trading/carbon sequestration/climate change, Fermentation technology, Image processing techniques for characterization of agricultural produce, Sensor based applications including bio-indicators, Nano technology, Non-chemical/non thermal processing and membrane techniques, Nutraceuticals and Smart packaging. The state agricultural universities are our main source of developing competent human resources that are so critical for the development of agricultural sector. The Central Government through the Indian Council of Agricultural Research provides professional and financial support for enhancing the quality and relevance of higher agricultural education in the country. It is, however, recognized that the major support comes from

the respective state governments. Over the years, the level of public finance to the State Agricultural Universities have remained far below their requirements resulting in not only seriously jeopardising the quest of quality man-power for carrying out their intended functions but also the ability to build up the research facilities which are crucial to adopt cutting edge technologies in various fields. Even the meagre amount meted out to these universities are utilised for the expenditures on establishment charges. It is imperative that a separate budget-line for higher agricultural education and research is earmarked in the State budget to the Agricultural Universities to become globally competitive.

Quality of education in most of the agricultural universities is affected due to shortage of dedicated teaching faculty. Lifting the ban on recruitment of teachers and allowing universities to select competitive faculty are issues which need urgent attention. The Agricultural Universities of Gujarat are fortunate to receive very good support and encouragement from the Government of Gujarat. I appreciate the proactive role of Hon'ble Agricultural Minister, Shri Dileep Sanghani in this context.

The focus of reforms in agricultural education has to be on the creation of new knowledge with both social and economic perspectives. It is not just the new invention or a discovery that is important, but the recognition of the

potential of their approaches for developing new products, services or systems that add value to bring about significant changes in the society. Setting up an effective innovation system would essentially require networking of institutions in the public and private sectors, the NGOs, CSOs and farmer organisations, so that all these stakeholders interact and become partners in the production, diffusion and use of new and economically useful knowledge; and that alone would further enhance the innovation process.

Rapid growth of information and communication technologies (ICT) in the past decade and use of knowledge as a basic power to deal with global competitiveness have revolutionized all levels of higher education. Leveraging modern ICT tools in the formal educational process and non-formal, lifelong learning of farmers are necessary to emphasize innovation and development of new technologies and building capability and competence of rural communities. We need a revolution in skill management and knowledge dissemination which has the potential to expedite increase in production, productivity and value addition to agricultural produce, thus enhancing the overall returns reaped by the farmer. There is a need for a well-developed dynamic information infrastructure and effective agriculture innovation system.

Dear students, remember, education is a life-long process and graduation is just one milestone in the journey of learning. The Manusmriti says that the pupil obtains one quarter of his learning from the teachers, another quarter from his own intelligence, the third quarter from association with fellow-students and the remaining quarter in the course of time by his experiences. Remember, excellence is a journey and not the destination. Knowledge gained by learning needs to be spread and applied in everyday life. The aim of education is to prepare young minds to accomplish a given task with more accuracy and perfection.

As you step into the world, remain young at heart and be open to new ideas. Endeavour to be the best in the world in whatever you choose to be. Necessary qualities of a good citizen are sincerity, integrity, and compassion.

This is not the only test. Many appraisals and re-appraisals await you in life which you will have to face with the same if not greater seriousness. You are bound to succeed in those appraisals. Work hard honestly and have faith in yourself. Remember, there is no short cut to hard work and sincerity. Believe in these values and you will end up as a responsible and responsive citizen. I take this opportunity to once again extend my heartiest congratulations to all the students who have received their well deserved degrees and

awards today. I also heartily thank the faculty members for having trained these young minds.

I whole heartedly express my sincere thanks to the authorities of this esteemed University for inviting me to the Convocation function.

Thank you!

ARISE, AWAKE AND PERFORM

JAI HIND