

SEVENTH ANNUAL CONVOCAATION

Saturday, 18th February, 2012

**CONVOCAATION ADDRESS BY
CHIEF GUEST**



Dr. P. Rethinam

**Former Assistant Director General & Member,
Governing Body, ICAR, New Delhi &
Ex. Director, National Research Centre for Oil Palm,
Andhra Pradesh**



NAVSAARI AGRICULTURAL UNIVERSITY

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Her Excellency, the Governor of Gujarat and the
Chancellor of Navsari Agricultural University,
Dr. Shrimati Kamlaji, Honourable Minister of State,
Agriculture and Water Resources, Shri Kanubhai
Bhalala, GoG, Gandhinagar, Honourable Vice
Chancellor of NAU, Dr. A.R. Pathak, Honourable
Vice Chancellors of State Agricultural Universities of
Gujarat, Dr. N.C. Patel, Dr. A. M. Shekh, Members of
Board of Management, Academic; Research and
Extension Education Councils, invited guests, teachers,
scientists, students, representative members of press
and media, ladies and gentlemen!

It gives me immense pleasure to be with you all
today on this very auspicious day of Seventh Annual
Convocation. I sincerely express my gratitude for



inviting me to address today's Convocation ceremony of this prestigious and vibrant University, which has shown tremendous growth in the last few years. This is also an opportunity to pay rich tributes to this great land of Mahatma Gandhi, Sardar Patel and many such luminaries. I congratulate the degree recipients and also those who are receiving their honours and medals. This is one of the most crucial movements in one's professional career from which we march ahead in life. This is also the beginning of altogether new era and appropriate time for the sense of beginning of payback period for the society, state and country as a whole. Dear Degree Recipients, you have been well equipped to resolve the variety of challenges which are being experienced in day to day's life.



Friends, you might stop class room education, but do not cease the process of practical learning in your life. The sciences are fast growing and new branches such as nano-technology, bioinformatics, biotechnology, nano-biotechnology are emerging. Learning should be an uninterrupted and essential process to keep pace with the advancement of science. technology and life around you. The faculty of this University too deserves





my compliments for bringing you all to this level. They will feel proud, when they come to know that their students have excelled in all walks of life.

I am sure, you will always cherish the happy memories and noteworthy contributions of your mother institution, which has piloted the agrarian growth and development of the state. The University has excelled in many areas of education, research, development and transfer of technologies. With this background of an excellent education and research at Navsari spread over 1000 acres area with 14 substations representing different agro-climatic conditions of South Gujarat, this University has fully bloomed now with faculties, research stations and KVKs. Commendable work has been done in modernization of educational and research infrastructure, quality education and research and reforms to suite the emerging new sciences.

Of India's total geographical area, around 43% land is under agricultural use. Monsoon dependent agriculture is practiced in 58% of the arable land. In a scenario of increasing human and livestock population, decreasing land to man ratio, conversion of productive







agricultural lands to non-agricultural uses, deteriorating natural resources, global climate change, decreasing total factor productivity of major crops, frequent occurrence of natural calamities like drought, flood, cyclone *etc.*, it is our obligation to the future generations is to leave for them a greener earth planet and undeteriorated land (soil) and water resources. These two prime resources are intricately related to the existence and propagation of life on this planet and are thus integrated into any development plan.

The State of Gujarat has wide variety of soils, climate, cropping pattern and extent of water availability and its quality. The variation in soil is ranging from extremely sandy in North Gujarat to clayey in South Gujarat. While the soils of Saurashtra region are medium black calcareous, the soils of middle Gujarat are loamy in texture. Eastern hilly region soils are shallow with poor fertility due to severe erosion problems. In addition to such variations, salt affected soils in coastal as well as inland belts and waterlogged in canal commands areas further complicate the technology generation process. With respect to rainfall, it also shows tremendous spatial variability with high

coefficient of variance. This is evident from the rainfall in North and North West Gujarat is around 300 mm and that in South Gujarat it goes up to 3000 mm in some pockets. This is also amply reflected in the water availability for the irrigation purpose in different areas of the state . Of the total 42 per cent is irrigated area, surface water contributes 18 per cent as against the 82 per cent from ground water. The poor quality of groundwater is another severe problem particularly in coastal as well as inland areas. Because of this, situation wise array of crops are grown in the state. It is therefore, implicated that each and every situation arising out of various combination of the factors above would require specific technological inputs. For resolving these location and crop specific problems, all the four Agricultural Universities have developed location and crop specific technologies by utilizing the facilities available at 62 substations located in different agro-ecological situations of the state.



Gujarat with 1.96 lakh km² TGA, accounts for 6.19 per cent TGA of India, accommodating around 6 per cent population of country (121 crores). The population density of Gujarat is 308 persons/ km² with



considerable variations across the districts. While the population density of Kutch is only 46 persons/km², it is highest in Surat district (1376 persons/km²) followed by Ahmedabad (890 persons/km²) and Gandhinagar (660 persons/km²). The per cent decadal growth rate of population of Gujarat is 19.17 as against 17.64 of India. This implies that population in Gujarat is increasing at higher rate in comparison to India. Consequently, the per capita availability of net sown area has declined from 0.58 ha during 1960-61 to 0.19 ha during 2002-03 which will be further reduced to less than 0.15 ha in the years to come. This is also true for per capita availability of water and based on which Gujarat is categorized as water scarce state. Under the circumstances, the options available are i) intensifying the integrated cropping / farming systems through increasing area under irrigation; ii) improving input use efficiency by following precision farming concept; iii) economising the water and nutrient use through drip and fertigation; iv) developing crop varieties/hybrids resistance to biotic and abiotic stresses and iv) improving the soil health and land equivalent ratio by adopting integrated crop residue management system. With respect to cropping intensity of Gujarat, it varies from 103 and 115 per cent





over the past 60 years which needs to be enhanced. Similarly, in the areas of input (nutrient and water) use efficiency, it seldom exceeds 35 to 45 per cent. There is good scope for improving input use efficiency up to 70 per cent as the area under MIS in the state is increasing at very good rate and presently it is 4.37 lakhs ha. Because of expansion in area under MIS, the second generation problems related to maintenance and repairing are bound to arise. Apart from this, prevalence of mono-cropping with old varieties in rain fed as well as irrigated situations also causing crop productivity and soil health related problems. For addressing these problems most effective and eco-friendly ways, crop improvement towards higher yield, with good quality and resistant to biotic and abiotic stresses, using modern technologies and natural resources management related research needs to be reoriented to overcome the emerging challenges.



The agro-climatic diversity in the state and more so in South Gujarat, facilitate introduction of more remunerative and input use efficient crops like oil palm, castor (*rabl*), flowers, spices *etc.*,. Oil Palm is the future crop for improving the vegetable oil as well as bio fuel









economy not only in the country but also globally since this crop yields 4 -6 t of palm oil and 0.4 to 0.6 t of palm kernel oil /ha/ year. Gujarat had earnestly took up the oil palm during 1993-94 and yields started during 1997-98 but non allotment of areas to the potential processors, there was marketing and processing problems and the farmers have removed the oil palm planted. The processing came later but no crop. Successful oil palm crop is right here in this campus to see and convince about the performance. Gujarat has great potential for growing oil palm to more that 2 lakhs ha over a period of time as the irrigation potentials are continuously increasing. This will yield almost 8 lakhs tons / year after 12 years . Now three processors are operating to promote oil palm . If there is a political will it will come successfully. I am happy to learn that this University have recently got All India Co-ordinated Projects on these crops. Introduction of any new crops in an area will bring along with it the related industry also. The waste biomass generated by traditional and newly introduced crops also provide an opportunity for utilizing it in most efficient and eco-friendly way.







I am very happy to say that I am associated with on such innovative project viz., “A Value Chain on Utilization of Banana Pseudostem for Fibre and Other Value Added Products” as a Chairman of Consortium Advisory Committee. I feel proud to be Chairman of the project, as it is being well appreciated at National level and shortly will get international recognition too. The scientists of the consortium have established that from presently waste biomass of banana pseudostem, the products like woven and non-woven fabrics, microcrystalline cellulose of pharmaceutical grade, high quality papers from fibre, good quality vermicompost, particle board, fish feed and handmade paper from scutching waste, enriched liquid fertilizer and mordant in textile dyeing industry from liquid portion (sap) and edible products like nutritious candy, jam, pickles *etc.*, from central core can be prepared. By developing these products, banana growers can earn about Rs. 70,000 to 75,000 per hectare additional net profit. Apart from this, textile, paper and food industries will also get an alternative or supplementary raw material. This implies that apart from main products, the by-products can also be utilized profitably in eco-friendly manner. In this direction, ICAR is putting lot of emphasis on minimizing





post harvest losses of main products and developing value added products, utilization of waste biomass for generation of energy and developing various products. In light of this and your knowledge base, friends you have tremendous scope of getting employment or even to become independent and successful entrepreneurs. Becoming entrepreneur is a better option, as this will enable you to generate more employment that too in rural areas.



Earlier, we were talking about food security, but now we talk about nutrition security. People have become more health conscious and are demanding organic food, free from agro-chemical residues. NAU has developed a certified organic farm of about 12 ha. This is an excellent platform for developing agrotechniques particularly for organic farming system. As we know food and nutrition security is not restricted to simply production of adequate food grains, rather to their availability and accessibility to the masses. Therefore, generation of income from both agricultural and non-agricultural sectors is very important. It demands profitability from agriculture. For this, cost of production has to be brought down through enhancing



both labour and input efficiency, checking post harvest losses, adding value to the produce and streamlining the marketing process. For understanding the marketing process, NAU has well developed Agri-Business Management Institute. This will help you as well as farmers in realizing better prices of farm produce.

The graduates and post graduates of different faculties have to play a decisive role in bringing next “green revolution” rather “rainbow revolution”. Enthusiastic and young men and women like you must dedicate yourself in building up a healthy, wealthy and peaceful Nation and bring everlasting smile on the grim faces of not only our farmers but also the people at large. Every one of you should leave your foot print with your contributions made during your life time. Instead of identifying yourself as one among 121.02 crores population you should stand aloof for your contribution.

Once again, I congratulate the gold medalists, awardees and degree recipients and add few words of passing advice and wisdom which I normally give in Convocation Address. You have taken education but be remain ‘Educated’ in life, you have learnt lessons of Agricultural Sciences, but be remain ‘Learned’ as will be



approved by society, you have graduated but be remain 'Indebted' to partners, teachers and institution. You are now citizen thus be 'Civilized' forever.

As stated in the Vedas: "The people, who have given us this world and taught the ways to live herein, must be worshipped and the best way to worship them is to carry on the work they initiated and uphold the values they gave us"

Finally, I wish you great success in all your future endeavours.

JAI HIND
