

Padmashree Dr D Y Patil University

Fifth Convocation

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Convocation Address

by

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It is a privilege to have been invited to deliver the Convocation Address of this University, which bears the name of one of the greatest educationists and humanists of our time. The Founder Chancellor Dr D Y Patil has followed in his life and work the wisdom contained in an ancient Chinese proverb.

“If you are thinking one year ahead, plant rice

If you are thinking ten years ahead, plant trees

If you are thinking 100 years ahead, educate the people”

Subramanya Bharathi, a great Tamil Poet, wrote seventy years ago that nutrition and education are the two legs of a human being; nutrition for the body and education for the mind. I would therefore like to salute the Founder Chancellor, Dr D Y Patil, the Chancellor Shri Vijay D Patil, the Vice Chancellor and eminent Cardiac Surgeon, Dr James Thomas, the Board of Management, Faculty and above all the alumni of the University for converting the Chancellor’s vision into reality within a span of a few years. This University has become the flagship of the movement for integrating academic excellence and social relevance in the curricula of our educational institutions. I therefore congratulate the outgoing alumni on choosing this University for shaping your core values and your professional life.

I am happy that on this occasion you are honoring His Excellency the President of Guyana, Mr Jagdeo Bharrat and Dr Jawadekar, Former Director, Pfizer Ltd. I have had the privilege of being associated with a major environment conservation project in Guyana. The then President of Guyana, Mr Desmond Hoyte and the then Secretary General of the Commonwealth, Sir Shridath Ramphal invited me in 1989 to help in organizing a project for the sustainable management of 1 million acres of prime rainforest. With the help of the late Dr Cheddi Jagan, who is popularly referred to as the Caribbean Gandhi, I developed the Iwokrama Rain Forest Programme, which represents the world's largest adventure in the sustainable management of rainforests. In 1990, when I arrived in the Iwokrama forest, the local Amerindian population welcomed me with a song, the English translation of which is the following

“The sky is held up by forest,
If the forest disappears, the sky
Which is the roof of the world collapses
Nature and man then perish together”

It is such wisdom and ecological prudence that we need to recapture today, when we see all around us the spread of a greed revolution with reference to the exploitation of natural resources. Our Universities should foster the growth of the science of ecotechnology, which is the product of integration of traditional knowledge with frontier science. This will need a mind-set change in relation to the knowledge and wisdom of our tribal and rural families. In the Iwokrama project, I appointed Mr Fred Allicock, Leader of the

Amerindian population, as the Campus Director. Some of my Fellow Trustees pointed out that he has not even gone to a High School, let alone possessing a Ph D degree in Environmental Sciences, which in their view was the minimum qualification for a Campus Director. I told them that what Fred Allcock does not know about the forest is not worth knowing. Subsequent experience proved this early impression correct. I am mentioning this to emphasise the need for respect for local knowledge and experience on the part of the educated elite.

With the growing power of human beings in the fields of genetic modification and nanotechnology there is need for greater attention to Bioethics. As our distinguished Vice-Chancellor knows only too well, there are many ethical considerations in medical biotechnology, including the area of reproductive cloning. However, just because there are problems, we should not condemn the technology. Every area of frontier technology, such as nuclear sciences, can be used or abused. This is why the inclusion of Bioethics in the curriculum becomes important. Our aim in biological sciences should be the promotion of an era of biohappiness, based on the sustainable and equitable conversion of bioresources into jobs and income. **Bio-happiness and not bio-terrorism should be the end result of our scientific endeavour.**

Translational research is another area which is worthy of greater attention in our Universities. Our Prime Minister, Dr Manmohan Singh, recently pointed out that “while C V Raman won the Nobel Prize eighty years ago for the Raman Effect, most of the instruments available in India today using this principle are imported”. Translational

Research will help to convert scientific findings into commercially viable technology. While science advances the frontiers of knowledge, it is technology that converts scientific knowledge into products and processes and thereby generates wealth. Translational research is particularly needed in our country in areas relevant to rural professions, including agriculture, where the gap between scientific know-how and field level do-how is widening.

2010-2020 has been declared as the Decade of Innovation. The Union Minister for Human Resource Development, Shri Kapil Sibal, has recently expressed the hope that India will become an Innovation Super Power by 2030. There is also frequent announcements about India becoming a Knowledge Super Power. Unfortunately, those who make such statements as well as the Knowledge Commission seem to overlook the substrate conditions necessary for our young people to become masters of innovation. A recent report states that out of every 100 campus candidates interviewed last year by reputed companies only 10 to 20 have been found suitable. This points to the need for attention to the quality of education and also to the creation of opportunities for integrating theory and practice. Taking into account the uncommon opportunities provided by modern information communication technologies, we need to restructure and reform our teaching and training methods. We need a **Pedagogic Revolution** and I hope this University will become the leader of this revolution, thereby triggering a learning revolution in the country.

The other essential pre-requisite for achieving the position of a Knowledge and Innovation Superpower, is an opportunity for every new born child to achieve its innate genetic potential for physical and mental development. Every fourth child born in our country is characterized by low birth weight (LBW) due to maternal and foetal under-nutrition. Nearly 45% of children under the age of 5 in the country are under-weight. Such children suffer from many handicaps including reduced cognitive abilities. **To become an Innovation Superpower, we must first fight intellectual dwarfism caused by maternal and infant malnutrition.** We must adopt a whole life cycle approach in our plans for food for all and for ever. We must not deceive ourselves into believing that by establishing 14 Innovation Universities, we will become an Innovation Super-power. It is worthwhile recalling what JRD Tata once said, “I do not want India to become a super-power; I want it to be a happy country”. Nutrition and education are the pathways to a happy country. In this context, I shall briefly refer to the proposed National Food Security Act, designed to erase India’s image as the home for the largest number of undernourished people in the world.

Food and drinking water are the first among the hierarchical needs of a human being. Food security at the level of each individual child, woman and man is hence the first requirement for a healthy and productive life. This is why Mahatma Gandhi said in 1946 at Noakhali, “To the hungry God is bread”. Since our independence was born in the backdrop of the Bengal Famine of 1942-43, Jawaharlal Nehru said in 1947, “everything else can wait, but not agriculture”. These words are even more relevant today than 65 years ago, since our population has grown from 300 to 1200 million during this period.

The three major components of sustainable food security are:

- (a) **Availability of food in the market**, which is a function of internal production, and where essential, imports.
- (b) **Access to food**, which is a function of adequate purchasing power, and
- (c) **Absorption of food in the body**, which is a function of clean drinking water, sanitation and primary healthcare.

The proposed National Food Security Act is being designed to ensure economic access to food **through legal entitlement**, while factors relating to food production and absorption are proposed to be included as **essential enabling provisions**. In this context, it may be worthwhile drawing attention to the unique structure of Indian agriculture, as compared to the role of farming in industrialised countries.

- (a) In industrialised countries, farming is a food or other commodity producing machine, while in our country, farming is the backbone of the livelihood security system for over 60% of the population.
- (b) In industrialised countries, less than 3% of the population is engaged in farming and may be called “farmer – consumers.” However, in India, over 60% of the population belong to the “farmer – consumer” category.
- (c) According to the 2001 census, 70% of our population lived in rural areas. The 2011 census may probably show a rural-urban population ratio of 65:35, taking into account the growth of “rurban” areas, as in Kerala and the Punjab.

(d) Our 80% of the over 115 million farming families belong to the small (2 ha and less) and marginal (1 ha and less) categories. Nearly 60% of the area cultivated depends only on rainfall for crop cultivation. Dryland farmers cultivate climate-resilient crops like millets, pulses and oilseeds like castor. There is widespread malnutrition in the families of small and marginal farmers, as well as among share croppers, tenants and landless labour. Therefore, increasing the productivity, profitability and stability of small farms will, as a single step, make the largest contribution to overcoming endemic hunger caused by inadequate purchasing power.

Several genuine concerns have been expressed by a Committee chaired by Dr C Rangarajan with reference to our capability to increase food production to the extent needed to fulfill legal entitlements, the impact of higher government procurement on open market prices, and the total cost of the subsidy involved.

These concerns can be addressed only by long-term policy changes in both agrarian reform and agricultural revitalization, as set out in detail in both the Report of the National Commission on Farmers (2006) and the National Farmers' Policy (2007) placed in Parliament in November 2007. Quick-fix solutions e.g. "packages" can only make a temporary difference.

Since the major concerns of the Rangarajan Committee relate to production and procurement, I wish to address them briefly

Production: India has a vast untapped production reservoir in most farming systems, even with the currently available technologies. The gap between potential and actual yields ranges from 100-300 percent in both rainfed and irrigated areas, as per the data available with ICAR, Agricultural Universities, ICRISAT and Krishi Vigyan Kendras. A well planned “**bridge the yield gap movement**” on the lines proposed by the National Commission on Farmers will help to enhance the productivity and profitability of small holdings, leading to the alleviation of hunger among farm families as well as the other citizens needing nutritional support.

Procurement: Procurement stimulates and sustains production. Without procurement we would not have had a green revolution in the 60s and 70s. This is not only true for our country, but even for the United States where the PL480 procurement helped to sustain farmers’ enthusiasm. In contrast, there has been no green revolution in Africa inspite of the enormous amount of money invested. This is because prices collapse when production goes up. Most African Nations do not have a machinery to purchase grains at a minimum support price announced at the time of sowing. The presence of such a mechanism is our strength.

We should therefore emphasize that what Government should do is to intensify efforts in production and procurement and not continue the *status quo* with reference to millions of our children and countrymen remaining hungry. The following should be some of the essential components of a National Food Security Act.

- a. Adopt a **life cycle approach**, to legal entitlements, starting with pregnant mothers. A “First 1000 days Child Nutrition and Development Programme” should be organised to provide nutritional support to pregnant women so that the new born child has an opportunity for the full expression of its innate intellectual potential.
- b. Enlarge the food basket to include nutritious millets (*bajra, jowar, ragi, maize* and minor millets) in the Public Distribution System (PDS), thereby achieving double benefits, namely, improving nutrition security, while at the same time providing a market for the crops of dry land farmers and tribal families. Over 10 million tonnes of these crops can be procured from dry farming areas, much of it, from tribal families. These crops are also capable to some extent of withstanding drought and adverse climatic factors. They will therefore help to promote climate-resilient agriculture, an important need of the future.
- c. Develop a decentralised procurement system and a national grid of community grain banks, rural go-downs and modern storage structures.
- d. Under enabling provisions, the highest priority should go to increasing agricultural productivity, so as to meet the food requirements of 1.2 billion human population and 1 billion farm animals. In addition, the effective implementation of the Rajiv Gandhi Drinking Water Mission, the Total Sanitation Programme, and the National Rural Health Mission needs high priority. Also, nutrition considerations should be mainstreamed into both the National Horticulture Mission and the Food Security Mission, in order to overcome hidden hunger

caused by the deficiency of micronutrients like iron, iodine, zinc, Vitamin A and Vitamin B12. Horticultural remedies should be promoted for overcoming nutritional maladies.

- e. In the case of diseases like HIV/AIDS, tuberculosis and leprosy where prolonged treatment is necessary a Food cum Drug approach should be adopted, since under-nutrition reduces the efficacy of the drugs prescribed.

Let me once again congratulate the graduates of the year and their parents. You have been fortunate to have had your education at this great University, which has achieved a synthesis of high academic standards and core human values. I would like to conclude with a statement made in 1955 by Bertrand Russell and Albert Einstein in the context of potential nuclear conflicts.

“There lies before us, if we choose, continual progress in happiness, knowledge and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies to a new Paradise; if you cannot, there lies before you the risk of universal death.”

If you remember your humanity and cultivate the culture of compassion, a fulfilling life awaits you. You have my best wishes.