

TENTH ANNUAL CONVOCATION

Thursday 15th January, 2015

**CONVOCATION ADDRESS BY
CHIEF GUEST**



Dr.H. S. Gupta
Director General, Borlaug Institute
for South Asia (BISA),
New Delhi



NAVSARI AGRICULTURAL UNIVERSITY

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NAVSARI 396 450

Tenth Annual Convocation
Navsari Agricultural University, Navsari
Convocation Address by
Dr. H. S. Gupta,
Director General, Borlaug Institute
for South Asia (BISA), New Delhi

Hon'ble Governorshri of Gujarat and Chancellor of Navsari Agricultural University, Shri Om Prakash Kohliji; Hon'ble Minister of Agriculture, Gujarat State; Shri Babubhai Bokhiriaji; Hon'ble Vice Chancellor of this University, Dr. C. J. Dangaria; Hon'ble Vice Chancellor of other Agricultural Universities of Gujarat; Registrar; Deans; Directors; Members of the Board of Management and Academic Council; Distinguished Guests; Faculty Members; Representatives of Print and Electronic Media; my dear students and their parents; Ladies and Gentlemen!

I am delighted to be at this historical campus on the occasion of the 10th Annual Convocation of this University, which sowed the seeds of agricultural development in South Gujarat through its previous *avatars* N.M. College of Agriculture way back in 1965. Contributions made by this University through the diploma, undergraduate and postgraduate programs

have resulted in the availability of precious human resources at the state as well as at the national level. Navsari Agricultural University (NAU) has, thus, brought agricultural research and development at the centre stage with its graduates forming the core of human resource in the state's agricultural research and education system. I congratulate all the students who have received their degrees today and all those who have received medals for their outstanding performances. I wish you all the very best in your future pursuits. Today is a great day in your career as you enter in a different phase of your life.

Indian agriculture has contributed not only in solving the problem of availability of adequate quantity of food grains to its people but also has helped the country in earning foreign exchange through export of agricultural commodities. The country, which used to import around ten million tons of food grains annually during the 1960s to feed 1/3rd of today's population of India, is now the largest producer of milk & pulses, 2nd largest producer of rice, wheat, fruits, vegetables & fish in the world. In fact, we export agricultural produce worth the value of two lakh forty seven thousand crores annually. Production of adequate quantity of food grains, despite several constraints like natural calamity in one or

other part of the country, has enabled the Government of India to bring a food security act that entitles adequate quantity of food grains to almost 70% of our population at a nominal price. The success story of Indian agriculture is cited throughout the globe. However, today we are faced with a bigger challenge of feeding the growing population, which will exceed that of China very soon.

With a quantum jump in the productivity of food grains, we have been able to meet our calorie requirements without much horizontal expansion of area under these crops. This provided us an opportunity to diversify our agriculture through horticulture and livestock. Horticulture has been a great success and our production surpassed that of food grains during 1012-13 when India harvested 268.8 million tonnes of horticultural produce for the first time in the history of the country. Last year, we again broke the record by harvesting 280 million tons of horticultural produce. However, despite such an impressive performance in agriculture sector, we have not been able to impart nutritional security to our people and 45% of our children below the age of 3 years remain undernourished. You will be surprised to learn that every third child born in India is underweight. The estimated annual loss to the country due to

malnutrition is around 17.2 billion US Dollars, which amounts to 2.5% of the country's GDP. We will have to face this challenge and make sure that our people do not only get adequate quantity carbohydrate but also get enough protein, lipids, vitamins and minerals.

The Challenges Ahead

The success of Indian agriculture is acclaimed world over. However, it has been possible only at the cost of our natural resources like soil and water, which we have been losing at a fast pace, and therefore, we need to conserve them for posterity because 'we have not inherited them but borrowed it from our children'. Fertility of Indian soil has been reducing and we need to take steps to reverse this trend. Soils are our silent ally in food production. In view of its importance, the 68th UN General Assembly recognized 2015 as the International Year of Soils. Further per capita fresh water availability in India has come down to 1/3rd during the last fifty years and agriculture uses >90 of fresh water. Therefore, we need to double our water use efficiency in agriculture and the Hon'ble Prime Minister has rightly endorsed the call for 'more crop per drop'. Climate change has further complicated the situation and it is predicted that almost 30% of wheat and 10-15% of maize production will be

lost owing to rising temperature, if no remedial measures are taken. Therefore, we have to conserve our natural resources on one hand and develop climate resilient precision agriculture on the other so that we continue to produce adequate quantity of food grains, fruits and vegetable to feed our people and keep them healthy. I am delighted to learn that NAU has undertaken a new initiative by joining the 'National Initiative in Climate Resilient Agriculture' (NICRA) to address the issues of climate change with special reference to agriculture.

Let me now tell you some of the facts related to pulses and oilseeds that are integral part of our diet and we are spending huge amount of foreign exchange on their import for meeting our present requirement. The PMO has recently asked the commerce ministry to find out ways and means to reduce our dependence on import of these commodities.

- (i) Although we have been able to produce adequate quantity of cereals, but pulse production has not kept pace with population growth; consequently, per capita availability of pulses has gone down from 50 gm/day during 1950s and '60s to almost 35 gm/day today. Thus, in order to meet the requirement of pulses, we are importing pulses to the tune of approximately eleven thousand crores

(equivalent to 1.8 billion US \$) annually. Last year, we imported 3.4 million tons of pulses despite our domestic production of 19.27 million tons. This gap in demand and production can be bridged with the technology available with us.

- (ii) Yet another challenge is in the area of edible oils. India was importing just 3% of its edible oil requirement in 1992-93 and this has grown to nearly 55% last year, during which we imported edible oil worth more than 43,000 crores (equivalent to 7.25 billion US \$). Though there was a major policy shift in the import of edible oil, yet the fact remains that we have not been able to improve oilseed productivity significantly. Indian scientists have to take the lead and solve the problem in a mission mode so that import of edible oil can be reduced significantly.

Need to Move Forward

India has a vast pool of scientific manpower capable of solving the above issues. However, we have made limited use of their potential for one reason or other. Therefore, you as young graduates of this great University have to help the country in overcoming these problems. Gujarat has shown the way to the nation how to produce milk and increase the income of small and

marginal farmers, who constitute approximately 85% of the total farming family of India. Can we technologically empower these small and marginal farmers in their efforts to diversify of our agriculture so that they not only earn more money but also are nutritionally secure? I call upon you to take up transfer of technology in a big way so that the income of the farmers increases and farming becomes a more dignified profession.

Production and supply of seeds and planting material are important for improving productivity of various crops and ensuring the quality of the produce. I am delighted to learn that the University produces around 5,000 quintals of quality seeds, which can be doubled easily. This will have a snowballing effect and will help the seed producing agencies, farmers as well as the University. Tissue culture facility for mass production of plants of sugarcane as well as banana will help in increasing the production and productivity of both the crops. There exists tremendous potential for increasing cropping intensity in this part of Gujarat.

Wastage of agricultural produce has assumed alarming proportion, and according to an estimate the country loses around fifty thousand crores annually in pre- and post-harvest processes. Therefore, it's time to move forward and take up processing and value addition

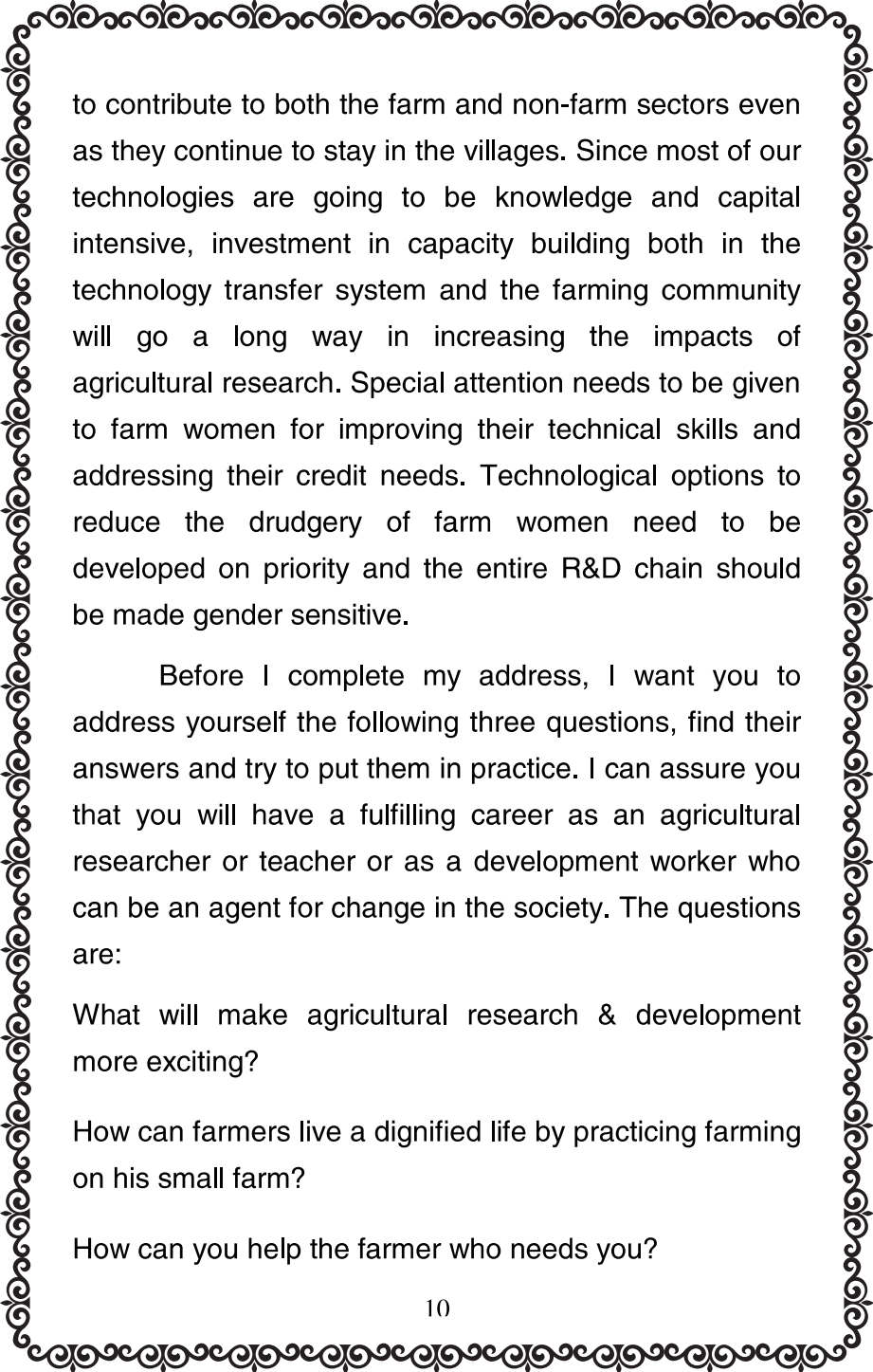
in agricultural produce. This will not only save the losses but also help the farmers make agriculture profitable through value addition - be it in agricultural, horticultural or livestock commodities.

Empirical evidence shows that agricultural research is one of the major sources of agricultural growth in India. Every rupee invested in agricultural research gives a return of rupees thirteen and a half by way of increase in agricultural productivity and saving of the costs. These payoffs from agricultural research far exceed those from other sectors and do not show any tendency for slowing down. It is an established fact that the direct impact of agricultural growth on poverty reduction is twice that of the growth accruing from non-agricultural sector. Poverty reduction mediated by investment in agricultural growth is, perhaps, one of the best examples of productively utilizing public funds. Now the big question is how to mobilize the much needed funds? One option is to explore the possibility from the public and private sector companies operating in Gujarat and are willing to invest in 'Corporate Social Responsibility'. I call upon the University administration to take effective measures in this direction and mobilize resources for transfer of technology relevant to small,

marginal and landless farmers, particularly those living in the three tribal districts of South Gujarat.

With increasing pressure on natural resources, there is an immediate need to increase the resource use efficiency in agriculture. In view of the tremendous pressure on water resources, the whole paradigm of input use efficiency needs to be addressed comprehensively. Farm mechanization is another area needing attention to improve the operational efficiency of farming, so also post-harvest management and processing for value addition. It is important to empower the farmers with new technological advancements and link them directly with the markets to increase their share of profit. New growth opportunities in secondary agriculture, specialty agriculture and eco-tourism have tremendous potential for increasing the farm income. It is only by making farming a more remunerative enterprise can we attract rural youth to take up farming as an occupation?

Human resource development is the key to any development process and this is particularly true for the agricultural sector where small and marginal farmers constitute more than 80%. It is, therefore, necessary that we pay adequate attention to the development of their basic and entrepreneurial skills so as to empower them

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to contribute to both the farm and non-farm sectors even as they continue to stay in the villages. Since most of our technologies are going to be knowledge and capital intensive, investment in capacity building both in the technology transfer system and the farming community will go a long way in increasing the impacts of agricultural research. Special attention needs to be given to farm women for improving their technical skills and addressing their credit needs. Technological options to reduce the drudgery of farm women need to be developed on priority and the entire R&D chain should be made gender sensitive.

Before I complete my address, I want you to address yourself the following three questions, find their answers and try to put them in practice. I can assure you that you will have a fulfilling career as an agricultural researcher or teacher or as a development worker who can be an agent for change in the society. The questions are:

What will make agricultural research & development more exciting?

How can farmers live a dignified life by practicing farming on his small farm?

How can you help the farmer who needs you?

Your efforts in taking the technology to the doors of the farmers through '*Krushī Mahotsava*' is a laudable initiative and it has paid rich dividends by benefitting more than one lakh forty thousand farmers. This initiative of Gujarat needs to be emulated by the other states of the Indian Union. According to a study, we have been able to transfer only 55% of the technology developed by us and the rest still remains with the institutions that have developed by them. It's high time that the farmers got what has been developed for them and what can help them earn more. I am delighted to learn that the University's work is being recognised at national level and you won the '*Mahindra Samridhi Award*' last year. I wish you many more successes in the New Year.

I compliment the Vice Chancellor, faculty members, staff and students of this University for their outstanding accomplishments and the Government of Gujarat for providing facilities and able leadership. Many institutions in the west are now keen to collaborate with Indian Universities/institutes in a partnership mode. The power of science is essentially based on new ideas that lead to the creation of larger social benefits. I am sure, the young minds and the faculty sitting here today will give their best to demonstrate this power of science and make the state proud. I once again congratulate all those who have received their degrees, diplomas and awards from this temple of learning.

JAI HIND

