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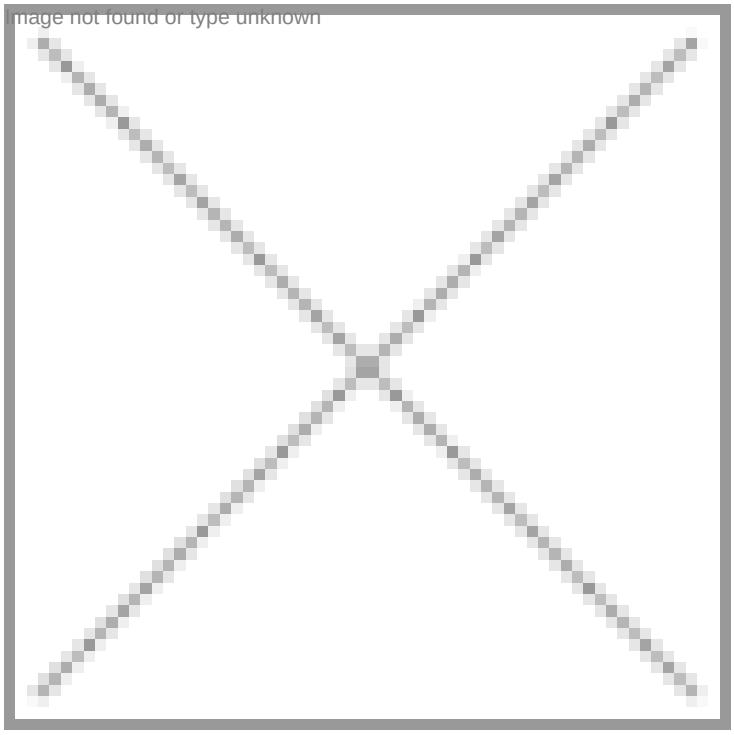

Government committed to revitalizing Indian agricultural research system, says PM

Delivering the valedictory address at the International Conference on Agriculture for Food, Nutritional Security and Rural Growth organized by The Energy and Resources Institute (TERI), the Prime Minister, Dr. Manmohan Singh, expressed the Government's commitment to revitalize the Indian agricultural research system, so that the world's largest agricultural research system could maintain its sense of innovation, creativity and a sense of purpose. Excerpts from his speech

"No group of intellectuals or workers in the post independence India has made such a phenomenal contribution to the removal of poverty and the promotion of sustainable development than our agriculture scientists. We are very fortunate that the doyen of that group of scientists, Prof. M.S. Swaminathan is here in our midst. His life and works constitute like the life and work of Prof. B.P.Pal, a source of great inspiration and I dare say that will be so for many generations to come.

Dr Pal was a great scientist and researcher, a visionary institution builder, a committed nationalist and patriot, and, above all, a fine
human being.

Our nation at its Independence, was blessed by a generation of great intellectuals who were also institution builders and nation builders. The great institutions of research that we are today all proud of were built by men like Dr Pal. They were men and women of great courage, foresight, and vision. Nowhere in the developing world at that time were there scientists of such

global stature. Dr Saha, Dr Bhabha, Dr Pal, and so many others, built institutions of excellence like the Indian Institute of Science, the Tata Institute of Fundamental Research, the National Physical Laboratories, and this great conference of the Indian Agricultural Research Institute. The challenge before us is to preserve these institutions and build upon their achievements. I have often said that the acid test for the good health of any system is its capacity to reproduce itself and therefore, our institutions must acquire a caliber to breed excellent as well as social commitments social relevance as an integral part of their growth process. We owe this to our people and our nation. We must of course ensure that the benefits of modern education and science do reach all sections of our society. Equally we owe it to our posterity that we build and preserve institutions of great excellence and world standing. India cannot be satisfied with anything but the very best. We must have the ambition to get away from this attitude of 'Chalta hai'(anything goes). We must imbibe the inspiration, we must have the courage to think big, to think out of the box that's the only way we can use human knowledge as a major source of India's prosperity, India's growth and enabling India to acquire its rightful place in the comity of nations.

It is scientists like Dr Pal and Dr Swaminathan who laid the foundations of our Green Revolution. If today India is substantially self-sufficient in food, it is to a great extent because of their dedicated work in increasing yields and incomes. The application of scientific knowledge was the essence of the Green Revolution. New seeds, new fertilizers, new ways of farming and providing extension services were all examples of the application of scientific and technological knowledge.

Apart from contributing to food security, the Green Revolution also increased the incomes of farmers in many parts of the country. It has contributed to agrarian change and rural development. I salute the great scientists and our farmers for their contribution to this vital aspect of our nation building process.

The Green Revolution was not just about yields and incomes. It was also about empowerment. By increasing the value of knowledge in improving the lives of our farmers, it empowered them. It enhanced the country's food security. However, we have yet to ensure the nutritional security of all our people particularly our children and women. We must ensure that the benefits of food security translate into the nutritional security of the poorest of the poor - that's the challenge. It looks formidable, but I do believe that our nation has resources and the willpower to meet this challenge. What we need today is a practical, viable strategy to reach to the poorest section of our population. Resources are not that binding a constraint today because our Government stands committed to enlarge very substantially those segments of our development program, which will help to improve the nutritional status of our women and children.

I have been told our extension system is in dire need of restructuring and betterment. I do not see here any new, big ideas on how we can extend the benefits of modern science and technology in an effective manner to our farmers. All over the country I find bureaucratic hurdles have put a stop to revitalizing our extension services. I hope our scientists and technologists and the Ministry of Food & Agriculture will look into how we can find new pathways to revitalize our extension services.

In the way our agricultural universities and research institutions work, we are committed to revitalizing the Indian agricultural research system. There are hurdles, there are true efforts, but you have to give us the guidance and show us the way forward, how this massive, the world's largest agricultural research system can maintain its sense of innovation, sense of creativity and a sense of purpose.

We have to think fresh in the way we extend credit to our farmers and I say so for more than one reason. As our agriculture becomes commercialized, there will be more reliance on commercialized inputs. Farmers will need therefore, more credit. If you are operating a system in which more and more innovations also are the by-product of the functioning of not the public sector system, but of private enterprise and that's the reality. The first generation of agricultural research was a by-product of functioning of public sector system. In our own country, as well as abroad, now for greater reason, the science and technology is also being increasingly privatized. What are the implications of transforming our agriculture in this new era of increasingly privatized science and technology. This is also an issue over which we must ponder. If we don't pay adequate attention to this aspect of sustaining our agricultural growth in this new era, public-private partnerships can be voluntary, but very often the public-private partnership is nothing more than a buzzword. We have to convert it into a viable development strategy and I seek your talent, and your guidance as to how to cope with this buzzword.

I do believe that in each of these areas the application of knowledge is crucial.

As I told the Indian Science Congress earlier this year, our vision of rural India is of a modern agrarian, industrial and services economy, co-existing side by side, where people can live in well-equipped villages and commute easily to work, be it on the farm, or in the non-farm economy. There is much that modern science and technology can do to realize this vision. I do believe that knowledge can contribute a great deal to this gigantic national effort. Our scientists therefore have an exceedingly important role to play in this realm.

Many of you have been preoccupied with the problem of agricultural production and productivity having hit a growth plateau.

Dr Swaminathan has repeatedly alerted us to the need to give a new boost to agricultural research. I do recognize the need to increase the efficiency of utilization of inputs, the need to improve farm management practices, the need to reduce post-harvest losses through better post-harvest management technologies in storage, transportation and processing. These can increase both yields and contribute to higher income for the farmer through better value addition.

We do need a lot more attention to be paid to the management of our agricultural research and technology system. We must also ponder why is that Bihar which was chosen to be the original location of the Indian Institute of Agricultural Research, why it has failed to catch up with the rest of the country? Bihar, in 1950 was described as the second best governed State in the very famous Paul Appleby Report. From that point, from that benchmark where Bihar is today in terms of its absorptive capacity? This is worthy of exploration, why a state like Bihar has not been able to catch up with the rest of the world? We must also ponder - we have Indian Rice Research Institute located in Cuttack, yet Orissa remains by and large still a mono-crop economy. There is something wrong with our ways we manage our agricultural research and technology systems and I say so with all humility. I don't know the answers but I do feel that these are issues, which need in-depth analysis.

I also do believe there is a need for increased application of science and modern technology to forest conservation and management, environmental protection, management of our animal husbandry resources, water conservation and utilization of herbs and plants. We need a harmonious blend of advanced science and technology, appropriate technology and local knowledge to ensure an equitable distribution of the benefits of new knowledge.

These are the objectives of what I have often called the Second Green Revolution. Dr Swaminathan and the National Commission on Farmers have suggested a "programme of renewal" that would be its starting point. To the five components suggested by Dr Swaminathan, I had added two more, when I addressed the Science Congress at Ahmedabad. The Seven components identified are:

- soil health enhancement through concurrent attention to the physics, chemistry and microbiology of the soils;
- water harvesting, water conservation and sustainable and equitable use of water;
- access to affordable credit and to crop and life insurance reform;
- development and dissemination of appropriate technologies and,
- improved opportunities, infrastructure and regulations for marketing of produce,
- the application of science and biotechnology to the improvement of seeds and utilization of herbal and other plants;
- the application of science to animal husbandry to improve the productivity of our livestock and poultry.

We must recognize that there has been a paradigm shift in our perspectives with respect to agricultural development and research. The focus of our agriculture has also shifted from staple crops to high value crops. Apart from government funded research and extension work, we now have privately funded R&D and extension services, like e-chaupal. As I said earlier, the recent privatization of science and technology, there is also an implication on the future of our agricultural growth. How do we manage this technological revolution that does not hurt our farmers but it enables us to reach the new frontiers of production that is something I do believe require some fresh thinking.

Our scientists must work with Government and non-government organizations, local bodies and corporates, to take knowledge to its user. The revolution in information technology has opened up new opportunities. It has made it easier for us to take knowledge to its user. However, the market for knowledge has not yet fully developed in rural areas. It is the responsibility of Government, of non-governmental organizations, of farmers' organizations and of the suppliers of such knowledge-based services to create such a market.

Your conference has also discussed new developments in bio-technology and new materials and their contribution to agricultural development. Here again, we have been fortunate to have created a strong foundation for further development.

Our track record in these areas has been impressive and holds promise of more development. Perhaps a much sharper focus is required on strategic research in plant technology.

If the pattern of energy consumption and utilization in Indian agriculture can be altered, made more environment friendly and less dependent on fossil fuels, it could have far-reaching consequences for our growth process, our environment and the well-being of our people.

Indian agriculture certainly needs new investments. It needs new productivity enhancing measures. It needs a new wave of entrepreneurship. The agricultural credit system must respond to the felt needs of the farmers. And so should our scientists and managers. Greater public-private partnership is required, but it must not remain a mere buzzword. It can contribute to a revitalization of public institutions and programs and for this we must use
all our knowledge, wisdom and experience â€“ both in the public and private sectors".