

## YASHWANT THORAT

## Executive Director, Reserve Bank of India and Former Chairman, NABARD

I would like to thank IFRI and its director, Mr. De Montbrial, at the outset, for inviting me to the third World Policy Conference. When the invitation was extended, I was secure in the knowledge that I would be a participant with the major responsibility of only appearing to be actively involved. The invitation to speak came later, and was accepted with a great deal of reservation.

Firstly, while I have spent over four decades in the area of rural credit, cooperation, microfinance and financial inclusion, I do not regard myself as an expert on the field of agriculture or in the real sector. However, the organisers of the conference were extremely persuasive, and convinced me to share some of my thoughts with you. Therefore, I am doing so subject to the caveat that you will take my remarks as those of an informed layman rather than an expert on the subject.

The subject of this session is particularly relevant in the context of India today. This is so because India is now revisiting the Green Revolution all over again in the context of the Millennium Development Goals, as well as the need for a second round of resurgence in agriculture. Looking back, there is clearly a lot we have achieved and a lot we have missed, which we now seek to address. Let me take you through some of the important milestones in our journey towards food security in the last couple of years.

The seeds for the Green Revolution were really the result of a global effort to improve food availability across the board. The years after World War Two were not years of plenty, and a large number of newly independent countries were looking to stabilise themselves and make food production and availability one of their primary objectives. Domestic production was seen as the answer to long-term independence and growth. This is where the years of research done by organisations like the IRRI and the CIMMYT came to the support of these nations, including India. The research at these institutions was based on simple yet effective solutions, and over a period of 20 or so years they succeeded in creating hybrid, high-yielding varieties that combined the characteristics required to improve production and maximise land use.

India began its journey down this road in the early 1960s, with self-sufficiency as its major objective. Our emphasis at that time was to make food available to the masses, and it is for this reason that we focused on cereals, especially wheat and rice. We quickly realised that the success of the revolution would require overhaul of the whole system, and many steps were taken to make this happen.



Firstly, the research system was opened up, and the Indian Council of Agricultural Research, the country's premium agricultural research institution, was reorganised. The signal given to the researchers at the ICAR was that grains from international bodies could be sourced and localised. Secondly, agricultural universities were set up at all major centres, with a starting profile that augmented the available talent in research and farm extension. Thirdly, trade policies were amended to permit hybrid seeds to be brought into the country. Fourthly, an all-India coordinated programme was launched to ensure that all parts of the country were engaged in the Green Revolution endeavour.

Fifthly, new markets were set up in anticipation of higher market arrivals once the Green Revolution got underway. Sixthly, new warehousing facilities were created to manage the projected produce. Seventhly, mechanisation was introduced and encouraged to minimise waste. Further, there was a conscious effort to ensure that critical inputs such as water, fertilisers and insecticides were accessible, and made accessible, to farmers. Finally, the Government took on the responsibility for procurement to ensure equitable distribution.

These steps, taken together, formed a package which was launched and simultaneously implemented across the country. Success did not come immediately; it took time, but when it came it was quite definite. Thus, from a wheat production level of 27 million tonnes in 1960, India progressed to 54 million tonnes in 1968, and a similar doubling of production was seen in the case of rice. The empirical finding was that our farmers were readily taking to the new seeds and practices, and benefiting to a very large extent.

Food shortages were pretty much gone from India by the 1980s. Cereals, which provided the required fuel calories, became available to an increasing number of Indians, and steps began to be initiated to dismantle rationing in urban centres for those who could afford to buy from the market. The new challenge which emerged was equitable food distribution, and areas of sparse availability became the new centre of national focus.

This process was repeated over time in oil seeds, where an oil seeds technology mission in the early 1980s doubled our production in eight years, and in milk, where a combination of cross-bred cows and a vibrant cooperative movement, acting jointly and severally, propelled us to the position of one of the foremost milk producers in the world. The story was also repeated to a greater or lesser extent in the case of poultry and corn.

However, notwithstanding the fact that these developments were gratifying, the list of challenges and the unfinished agenda have also remained very large. We find as a growing democracy that population growth, even at controlled rates, leads to high absolute numbers that have to be fed. Coupled with absolute numbers is the fact that our economy is on a high growth path, this has not only increased the demand for food products but also created a demand which is increasingly characterised by quality.

We are also aware, indeed painfully so, that land has become degraded with years of chemical use and needs to be rejuvenated, and that, further, water and irrigation facilities need to be augmented. Innovative ways have to be found to produce more and increase yields, because new arable land will not be available. This kind of list is endless.



We are making a sincere effort to address these issues in a number of ways. For instance, we are moving away from the concept of food security to nutritional security. We are trying to ensure that calorie availability, by itself, is enough. I am happy to report that three states in our country, namely Jammu and Kashmir, Punjab and Tamil Nadu, are already ahead of their Millennium Development Goals, and that four more states will shortly achieve these goals.

We are also improving our research and extension capabilities in respect of other crops, including coarse grains and pulses, so that more options are provided for balanced diets. Crop rotation and better land utilisation is being encouraged to increase production and improve land quality. Finally, technologies for better water usage are being consciously encouraged.

Having said this, I turn to the last portion of my presentation. Despite the steps we have taken, and which I have outlined, I must confess that collective memories linger a long time. One of our collective memories is that of the years of scarcity; hence we continue to be very conscious of any overdependence on imports. For example, in the case of pulses, we currently produce 14 million tonnes and consume 18 million, the gap being bridged by imports, and there are large numbers of people in the country who are deeply concerned about this. This gap is not very significant to my mind, nor is it of such an order that it would threaten our food security, but it illustrates the point that there is constant pressure to be self-sufficient.

We believe that consumption should be around 30 million tonnes to provide good nutrition to our citizens, and that this growth should be driven by India. This is the reason for my earlier remark that, in the context of food security, the challenges are never-ending.

What are our learnings form the Green Revolution? The first is that there must be a long-term strategy on food security and a long-term plan of action. This should be supported by a dedicated team of professionals working in a mission mode. We were fortunate to have strong leadership spearheading our Green Revolution, supported by professionals like Dr Swaminathan, Dr Curien and Dr Chadha, along with countless others.

The second learning is that you need to invest consciously and continuously in the process. There will always be new requirements and new challenges as the process unfolds, and therefore, unless investment is aggressively sustained, the impetus for Green Revolution seems to taper off. The third learning is that, for the process to succeed, you have to ensure all stakeholders buy into the process. This includes growers, traders, consumers, infrastructure providers and policymakers.

The fourth learning is that fragile frameworks do not work. You need to build a robust, comprehensive system that grows along with the plan; if you are planning X increase in production, the support system also has to grow by the same factor to handle increased quantities. We have also learned that, from the point of view of equity, you need a balance of activism, regulation and intervention, and disequilibrium in this mix tends to distort the process. Our last learning has been that the benefits of the process have to reach all citizens, as only then will there be a groundswell of support for the initiative.



I would like to say in conclusion that, while India has come a long way in the area of food security in the last 50 years, the road does not end here. New challenges remain to be tackled to equip the country to meet new benchmarks. For example, we have set ourselves new targets under our Food Security Bill, and have accepted those enshrined in the Millennium Development Goals. However, these targets and goals are no more than milestones on the very long route ahead. Our goal is to have 1.5 billion very well-nourished citizens, and it is to be hoped that we will achieve this goal with the cooperation of all concerned. Thank you very much.

## Philippe Chalmin, Professor, Paris Dauphine University; Founder, Cercle Cyclope

I think that this is a very impressive result that you managed to reach in India, and it could be an example for many other countries; I am thinking especially of sub-Saharan Africa. I have one question. Are agricultural prices in India completely managed by the state today?

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The management of agricultural prices has been an area of concern with us, and the choice between managed agricultural prices and free market prices has been a debate that has gone on for at least the last decade. We have consciously chosen to manage our agricultural prices. I would like you to remember that India is not Delhi, Bombay or Calcutta. India lives in 600,000 villages, and 60% of its 1.5 billion population live there. We see that we have to maintain equilibrium between the high growth rates of our services sector and the low growth rate of less than 2% in agriculture, and we have taken this as a conscious political decision. However, I was heading a commission recently, and one of our recommendations was to design a three-year plan for deregulation of essential prices according to free market rates.