Observations of Shri Gopalkrishna Gandhi, Governor of West Bengal and Chancellor
at the Annual Convocation
of
The Bidhan Chandra Krishi Vishvavidyalaya
Mohanpur
9 April 2009

Esteemed Chief Guest Professor M S Swaminathan, Dr. Sisir Kumar Mukhopadhyay, Smt. Mukhopadhyay, Dr. Abhijit Sen, Vice Chancellor of the Bidhan Chandra Krishi Vishvavidyalaya, distinguished guests, members of statutory authorities that administer it, teachers who give it meaning, staff who keep the campus in working order, and students who form its very life and purpose - I offer to all of you my greetings.

To the students who complete their course of study today I give my felicitation. I do so with joy and pride.

Doing and saying this is, of course, part of the well-oiled routine of convocations. Last year, I recall, I had referred to routine and cautioned against mindless repetitiveness, even in the context of agriculture which moves in seriation, one practice following the other with unvarying, cyclical regularity. And yet, farmers, children of recurring cycles that they are, know more than others how to expect the unexpected. And how to cope with, to adapt to and to mitigate the adversities that can come with the unexpected. Farmers are in fact the world's first climatologists.

Therefore, today also, while participating in the pleasant circularities of ceremony, we should be able to look up to the sky, like a farmer, and do some serious *new* thinking. There are two good reasons for this.

The first is that we have amidst us outstanding men from the world of agriculture's science and its art, and a truly transformational figure, Professor Swaminathan. Along with the late Union Agriculture Minister C Subramaniam, he so de-routined agricultural practices and policy in our country as to transform them into what was spontaneously and accurately termed a 'revolution'. By warding off scarcity, the green revolution warded off hunger. It also thereby prevented riots - food riots - protests and demonstrations that could well have, who knows, aggregated into a violent revolution.

The second reason why we cannot afford to let this convocation to become a ritual is that we are meeting when the time has come - or has it already passed us by? - for another 'revolution'. That this is going to be an even more difficult and demanding revolution has been envisioned by Professor Swaminathan himself. He has given it a useful name - 'the ever-green revolution', which will take the earlier one forward, even moving beyond and away from practices which have served their purpose.

Change is now called for in policies and practices that include and go beyond the operations of husbandry. This change would have been necessary in any case, given that our population has doubled since the time when the green revolution started. And change, on the wings of science, through agri-biotechnolgoy is in the air. But the phenomenon of global warming to which I referred last year here has made change, which would have been important something more, it has made it urgent, in fact, unavoidable.

Since we met here in this hall last year, our Gomukh has become smaller, the country has seen unseasonal and heavy rains falling in narrower and narrower time-bands causing flash floods, the winter rains have eluded us in parts of our State and the Darjeeling hills, always short of water, are left with precariously low reserves of water, even for drinking.

And, perhaps most pertinently for us, the sea-level along our coast and the Sunderban in particular has risen.

You and I have seen the advertisement of a certain brand of biscuit. It shows that biscuit resisting the damp of the coffee into which it is dipped, whereas other un-named brands break in half and tumble into the cup. You and I have seen river banks with trees and houses on them, crumbling into silted-up rivers. Soil erosion is an old problem in our State, global warming has had little to do with it. But if, the two phenomena are combined, the rims of islets like Ghoramara will also go under water exactly like those other, older 'biscuits'.

Our ‘Himalayan’ rivers are under stress. The Bhagirathi is continuously shifting eastward and a time may come when it could strain at the point where the Farakka Barrage holds it. Should we be doing something about this?

As you know, 62% of West Bengal’s land is irrigated but not entirely through rivers and river basins. Shallow and deep tube-wells play their part.

But how many of the shallow wells yield water in the summer months? Even the deep wells are straining to yield water. Likewise, what is the

prognosis for the Teesta Barrage when that river may receive reduced inflows?

You can therefore see why we should not let this convoking of an agriculture university family to be routine and why we should be asking ourselves these questions. This is where all of you have a role to play, a responsibility to shoulder, a duty to discharge.

I am sure you remember that last year I had asked you as experts-to-be in agriculture, how many of you had read the report of the National Farmers Commission, chaired by Professor Swaminathan. Let me not ask the students gathered here today : How many of you know the expansion of 'IPCC'? I am sure you do. The Nobel Peace Prize sharing Intergovernmental Panel on Climate Change established by the UN and the World Meteorological Organisation, in its report for 2007 has described evidence for global warming as being 'unequivocal'. It has said that eleven out of the preceding twelve years 'had been in the hottest top dozen on record'. The fact stares us in the face. On average, the global temperature today is higher than it has been in a millennium.

Just ponder that.

And think, with your powers of analysis and extrapolation, what this is going to mean for farms, farmers and food in India and the globalised world.

I will finish now with a quotation from Chris Patten, co-chair of the International Crisis Group and Chancellor of Oxford University. Lord Patten writes in his book *What Next ? Surviving The Twenty-First*

Century : " Global warming is about foreign and security policy; it is about trade and business; it is about opportunity and development; it is about stewardship; it is about 70 per cent of those alive today who are still likely to be alive in 2050. It is an issue for generals, priests, tycoons, trade union leaders, lawyers, farmers, civil servants, doctors and our emergency services, not just environmental NGOs. It is about making changes in all our individual lives. It is not just a mainstream issue, it is *the* mainstream issue. It has to be dealt with realistically and boldly."

Before the IPCC Report that I have mentioned and before Lord Patten wrote what I just read out, Professor Swaminathan had alerted us about the impact of global warming on farms and food. The Centre for Science and Environment and its gutsy journal *Down To Earth*, which I quoted from last year, has been doing that as well. Speaking at the IIT, Chennai not long ago, Professor Swaminathan drew attention to the role of modern biotechnology in mitigating the impact of climate change. He pointed out that biotechnology and genetic engineering could help develop species that would adapt to the changing conditions. Isolating the salt tolerance gene in mangroves or “wild rice”, or the drought tolerance gene in the widespread shrub *Prosopis juliflora* could form a “genetic shield” against the impacts of climate change.

“Rice” he said, “is going to be the saviour of our country in climate change”, pointing out that with 1,25,000 varieties, the rice plant had strains which would grow even in the midst of floods or rising sea water levels.

I would like to draw attention to another important comment of his. He said ‘orphan crops’ such as ragi, millet and other grains which would be

drought-resistant, adaptive to temperature changes and also provide healthy options, can be a factor in combating the effects of climate change.

Checking the dictatorship of carbon emissions requires policy interventions. Students of an agricultural university like yours can devote their formidable talent and training to devise policies that will make life bearable for the 70 per cent who will survive greenhouse gases into 2050 and hopefully beyond.

You can and should see where farm practices like what is called flood-paddy, stand in relation to global warming, where biofuels can help mitigate warming but with serious 'side-effects', where the received wisdom of dams and barrages needs a fresh appraisal. Agriculture engineers should be able to attempt a forward imaging of the rivers in our State.

More than the challenges of the present ‘money bubble’ known as the global meltdown or recession, more even than the real and vicious danger of global terrorism, the phenomenon of global warming can disfigure life as we know it. Unless the opportunities presented by it are seized by men and women like you, as Professor Swaminathan did when he and his peers faced the challenge of food scarcity in the India of the 1960s.

You must take up your bank jobs, join the faculty of this or another university, work in seed companies, or take up engineering responsibilities. But choose at the same time to either be one of those who need rescuing or one of those who do the rescuing and in fact can make rescuing unnecessary.

Choose to secure yourselves in the world - nothing to feel guilty about there ! - and also secure the world on planet earth - something to feel truly fulfilled by.