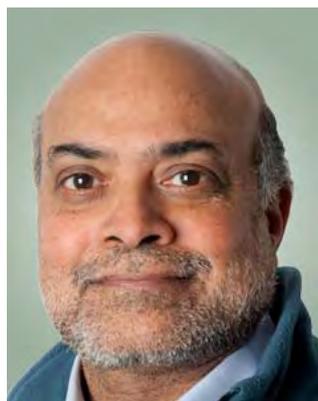


Reflections, Conclusions and the Way Ahead

Prabhu Pingali

Paper prepared for presentation at the “World Food Security: Can Private Sector R&D Feed the Poor?” conference conducted by the Crawford Fund for International Agricultural Research, Parliament House, Canberra, Australia, October 27-28, 2009

Copyright 2009 by Prabhu Pingali. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.



Reflections, Conclusions and the Way Ahead

PRABHU PINGALI

Bill and Melinda Gates Foundation
 Email: Prabhu.pingali@gatesfoundation.org

This talk reflects on the proceedings of the Crawford conference and provides a way forward in policy thinking. Effective food and agriculture policy decision-making requires clearer differentiation of countries by their stage of development. Operationally, it implies different approaches at the country level based on the stage of development. It requires concerted and coordinated efforts from the public and the private sector, and the international donor community. The Bill and Melinda Gates Foundation has committed itself to addressing the problems of chronic hunger and poverty in the least-developed world and for marginalised people in the emerging economies. The talk also provides information on the approach taken by the Foundation in agriculture development.

Introduction

This is my first ‘after-breakfast talk’; to do this in the splendid surroundings of the Australian Parliament house makes it even more significant. Thank you, Crawford Fund, for inviting me to do this.

DR PRABHU PINGALI is Deputy Director of Agricultural Development at the Bill and Melinda Gates Foundation. He was formerly the Director of the Agricultural and Development Economics Division of the Food and Agriculture Organization of the United Nations. He has three decades of experience analysing food, agriculture and development policy in Asia, Africa and Latin America. He has worked at CIMMYT, IRRI and the World Bank’s Agriculture and Rural Development Department. He is a Foreign Associate of the US National Academy of Sciences, a Fellow of the American Agricultural Economics Association and was President of the International Association of Agricultural Economists 2003–2006. Prabhu Pingali has authored ten books and over 100 referred journal articles and book chapters.

I would like to do two distinct things this morning: to reflect on the great presentations and conversations that took place yesterday, and to brief you on the Bill and Melinda Gates Foundation and what we do.

Yesterdays presentations

Yesterday provided a panoramic look at the broad issues around agricultural development and food security — where we have been and where we need to be. It is opportune to have this conversation today, because even two or three years ago you would not have seen the present level of interest in or excitement about global agriculture and food security issues.

It took a food price crisis and a financial crisis to remind us that there are over a billion people in the world who are hungry. It took financial and a food crises to remind us that more than 1.5 billion people are living with less than a dollar a day, and as Dyno Keatinge reminded us more than 2.5 billion people are malnourished.

Meeting the food needs of a growing population in the developing world continues to be the major global food policy challenge. Will we be able to feed the world in 2050? How are we going to do this? Phil Pardey pointed out the long-term productivity stagnation, and in some areas, decline. We faced these challenges in the 50s and 60s and we overcame many of them.

What’s new today is that there is not just one developing world, but many different ones. Problems are typically characteristic of particular countries and their individual stages of development. We need to be much clearer in stratifying countries by their stage of development and identifying solutions relevant to a particular stage

of development. For this talk let us consider two sets of developing countries: the least-developed countries; and the emerging economies.

Many of the least-developed countries are in Sub-Saharan Africa. These are countries where chronic hunger and chronic poverty persist despite all the efforts that have been made to increase productivity, to provide technology change and to change policies. These are countries that face the chronic problems associated with agriculture development: poor infrastructure, poor access to markets, lack of technology and R&D, poor human capital infrastructure and so on.

We need to identify the right solutions to address the problems of these countries. In some cases this may mean going back to where we were in the past to identify the productivity solutions that were created by the original Green Revolution. How can these be adapted to new environments and new social, economic and agricultural conditions? And learn from the mistakes that were made in the original Green Revolution and correct those mistakes? The work of the Alliance for a Green Revolution in Africa (AGRA) is exemplary in this regard (<http://www.agra-alliance.org/>).

The other set of developing countries are the so-called emerging economies. Here you see a lot of dynamism: rapid economic growth, rapid urbanisation, growth of the middle class, diversification of diets and a whole set of modernising changes taking place. In these countries you still have to invest in agricultural research and development, but it needs to be very different. The research focus in these countries ought to be one of primarily looking at how to sustain the productivity gains that have been made over the past 50 years; how to break away from stagnation in productivity; how to shift to a higher plateau of productivity for the basic cereal crops. At the same time, ways to commercialise and diversify smallholder agriculture to meet the demands by urban middle-class populations for a diversified diet are needed. We need to create sustainable links between smallholders and the supermarket systems that are exploding across urban areas. These are very different but extremely important challenges.

Across these two sets of countries at the ends of the spectrum, however, there are some common problems. An obvious common problem is that of climate change.

How do we handle climate change, and the resulting increases in vulnerability of the poorest

populations, across the developing world? Over the next decade or two, the problems of climate change and the way agriculture adapts to climate change and is a source of mitigation of climate change will represent significant new research issues. The way we address the problems of vulnerable populations and how they cope with climate change may become the new unifying theme that brings the research communities of the developed world and the developing world together.

An exciting new frontier for all is to create a sustainable source of support for the agricultural research system: an essential system even if there were no burgeoning food crisis. We should all look forward to this task.

The main focus of the conference yesterday was a focus on the private sector. Which private sector, where?

A private sector that is crucial in development is the home-grown private sector around input and output markets, around rural services that provide credit and other financial services. Small private-sector operations are becoming increasingly stronger in the emerging economies of the world, but continue to be very weak in the least-developed countries. This is the private sector that we must focus on, especially on getting rid of some of the existing market failures: high transaction costs associated with poor infrastructure, poor communication facilities, poor legal environments, poor regulatory environments, etc. Unless the public sector gets its act together to provide the basic business climate that the private sector can operate in, there will be little movement of the sector into the markets in rural areas.

The second important private sector is the multinational private sector that is increasingly involved in agricultural R&D. It is now putting far more resources into agricultural R&D than the public sector — but unfortunately the R&D done by the multinational private sector does not address the needs and the problems of the poorest people in the poorest countries in the developing world. This is another type of market failure.

How do you get the technological advances that can make a huge difference to the ability of poor developing-country farmers to cope with drought, or submergence, or various pest problems? There is enormous knowledge and technology already available but not applied. That's the market failure that needs to be addressed and that's where the

public sector — in the countries concerned but also the international public sector such as the CGIAR system — needs to get involved to break the market failure barrier that exists.

In the more emerging economies you see a very different scenario: here the private sector is moving very rapidly into agricultural R&D. Sometimes the enterprises are home-grown companies, sometimes multinationals. My own country India is having fairly rapid growth in private R&D. The private R&D work going on in the emerging countries is of high quality, equal to what you see anywhere else. The work, however, is necessarily focussed only on areas where it makes commercial sense for the company. It is not surprising that Bt cotton is spreading rapidly across India, but that is the only major biotechnology product to do so. What about rice, what about wheat and maize, crops that are crucially important to the poor people? There is not much investment, and this again is where the public sector needs to come in to underwrite some of the costs of making those investments; we don't have good models yet. A challenge is to devise effective models for public-private partnership.

Another challenge is associated with the growth of supermarkets. For a long time this has not been taken seriously. It is happening very rapidly. In the last five years the number of supermarkets within a one-mile radius of my house in Hyderabad in India has gone from zero to ten. The same thing is happening around the developing world, and one of the big opportunities for smallholder agriculture is to link into these supermarkets to grow themselves out of poverty by supplying the supermarkets chains.

Unfortunately the transaction costs for smallholders linking into supermarket value chains are enormous. We need to figure out mechanisms by which smallholders can participate in the supermarket revolution — to devise regulatory and contracting systems to ensure that high quality and safety standards are met and that diversity is fostered in production.

There is a lot of private-sector interest, but no private operator is willing to make the initial investments needed to get the smallholders into the system. That's where the public sector must come in and bridge the gap by reducing the risks associated with that initial investment.

As we look to 2050, there are huge challenges for enhancing agriculture productivity and improving

the lives of the rural poor in the developing world — possibly larger than the challenges we have seen in the past. I am enormously optimistic, however, that not only will we be able to feed the world in 2050, but that we will see a world that is much richer and with a quality of life previously unsurpassed.

The Bill and Melina Gates Foundation

The second part of my presentation is about the Bill and Melinda Gates Foundation.

Most of you are aware of the Bill and Melinda Gates Foundation; it started about ten years ago. It started because of a strong belief of Bill and Melinda Gates that all lives have equal value, wherever they may be, and that it is up to us to ensure that all lives are lived to full potential.

Today we are the largest private philanthropic foundation in the world. When the Foundation started ten years ago, the work was pretty much concentrated on two areas: on health issues around the world such as HIV/AIDS, TB and malaria, and inner-city schools in the United States. The goal in the latter was to bring a much higher standard of education and quality of school life to students.

About five years ago, the Foundation decided that it needed to address problems associated with chronic poverty and hunger if it was going to make and sustain improvements in global health. It was very clear that in addition to providing better medicines and better vaccinations it was necessary to invest in broader development interventions in order to change the long-term quality of life of very poor people in rural areas around the world. That was the genesis of a program in global agricultural development.

Why agriculture? It is very clear: agriculture provides one of the primary opportunities to address the problems of hunger and poverty in the developing world because most of the hungry and most of the poor live in rural areas. If you can increase food crop productivity in rural areas, the first and primary impact is better and more reliable diets for the populations that are growing the food itself. Then, there may be a surplus that can go into the market. The benefits of improved agriculture in reducing poverty are very clear across the developing world. Poverty has been greatly reduced by agricultural development in East Asia, South-East Asia and Latin America.

This evidence encouraged us to seek other areas where success is possible and to invest in agricultural development. Our vision was to focus on smallholder productivity growth as the primary mechanism for reducing poverty and hunger.

We targeted smallholder agriculture in Sub-Saharan Africa and in South Asia. Why these two areas? Because these are the areas where we still see stubbornly high levels of hunger and food insecurity, where hunger and low productivity problems have been persistent despite the decades of high-quality agriculture research that has been done. They are areas that have been chronically poor and where substantial effort needs to be made if there is to be a real change.

Thus we are aiming to have a massive and rapid impact on hunger and poverty in particular areas in particular regions. As we have looked at grant proposals that have come in and as we have talked to our partners, the one question that we have been asking very carefully and very clearly is ‘How does the work that you are doing result in a reduction in hunger and a reduction in poverty in Sub-Saharan Africa or South Asia? Can you show us the pathway for that impact? Can you measure your progress along that pathway?’.

It is very important to make the point that the Bill and Melinda Gates Foundation is basically a Seattle-based philanthropic foundation — a grant-making body.

We do not undertake any work on our own. Our job is to identify the best projects that are being done by the best possible partners and to empower them to do the work — and then empower them to make the change that needs to be made.

We have been working with some of the greatest partners around the world, and we are constantly expanding the set of partnerships that we have.

Our most important partner is AGRA — the Alliance for the Green Revolution in Africa, whose great work Namanga described yesterday. We also work closely with CGIAR centres, particularly the centres in Sub-Saharan Africa and South Asia. We have committed close to \$500 million to the CGIAR system to date, and our commitment is likely to continue, especially in view of the changes that are taking place in the system now. We have a close partnership with the UN Agencies, especially the World Food Program as described by Josette Sheeran (page 97). In addition we have been working with FAO, UNDP and the NGO community. Members of this com-

munity such as Oxfam have been major partners for us, but increasingly we have been working with NGO communities in developing countries.

Two weeks ago I was in Bangladesh and with the NGO BRAC (Bangladesh Rehabilitation Assistance Committee), a major partner in that country. BRAC is starting to become international, BRAC-Africa, for instance, is now becoming a major presence in the market for financial services for the poor.

One of the things I’m doing on this trip to see how we can work together with ACIAR, AusAID and Australian universities. How can we jointly make more rapid progress towards our common goals of hunger reduction and poverty reduction?

How do we work? Within the agriculture program, we’ve taken a value-chain approach in our grant-making. We make grants at the high end of the science and technology spectrum to bring the best possible science to address the problems of crop improvement, life sciences innovations, etc. in the developing world. Second, we emphasise methods for integrating at the farm level to improve productivity. We are looking at management technologies, better extension systems, better information systems at a farm level, etc. The third part of our strategy is to better connect the increased productivity to markets and improve the markets themselves so that there is a smoother chain linking smallholders to the market system.

Finally we’ve learnt the lesson from the past that it is not technology alone that is going to make a difference to farmer’s lives. If that technology is not put into the context of an enabling environment that allows farmers to enhance their productivity, there will be very little adoption. You need the incentive systems, you need the infrastructure, you need institutional change that is essential. So as a foundation we have invested and will continue to invest significantly in creating that enabling environment, in looking at the policy changes that needs to take place in order to provide farmers the environment for accessing technologies and improving their productivity.

Conclusion

Designing food and agriculture policy is substantially more complex in today's world than it was in the past when relatively closed food economies were the norm. While chronic hunger and poverty continue to be daunting problems in much of the developing world, income growth, urbanisation and global inter-connectedness bring about new policy challenges for emerging economies as well as for the least-developed countries.

Climate change adds to and or intensifies the stresses faced by poor farm households, particularly those in the least-developed countries and the dollar-poor in the emerging economies.

Modern food and agriculture policy needs to be redesigned and adapted to the emerging trends that developing countries are facing while at the same time ensuring that it reflects the stage of the development that the country is in.

The Bill and Melinda Gates Foundation is working to break these cycles of hunger and poverty by providing small farmers with the tools and opportunities to boost their productivity, increase their incomes, and build better lives for themselves and their families. On an annual basis, the Foundation provides grants of the order of \$450–500 million for agricultural development. That is a significant contribution from a private philanthropic foundation, but in terms of the real need for agricultural development it is a drop in the bucket.

At least nine billion dollars per year, targeted towards agricultural development, are needed in Sub-Saharan Africa alone. No one foundation can provide this: we need to work together. We need a coherent strategy that brings the bi-laterals, the multi-laterals and the foundations together to address the problems of chronic hunger and poverty in the least-developed countries, and the emerging problems in the rapidly-developing countries.