

# A WIDER CANVAS FOR INTERNATIONAL AGRICULTURAL RESEARCH

Emerging trends in world food security



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## Overview

BY Dr Gabrielle Persley

The Crawford Fund is launching a new research study on emerging trends in world food security and their implications for international agricultural research. The purpose of the study is to analyse the emerging trends that will affect the future research agenda and identify potential new funding streams for such research. The study will also demonstrate the benefits of investments in international agricultural research.

THE STUDY TAKES PLACE in the context of renewed concerns about world food security and a recurrence of factors that led to the food price spike that shocked the world in the first half of 2008. These factors include the competition amongst grain crops for use as food, feed or bio-fuels; the rising price of oil, which in turn increases the costs of agricultural inputs, particularly fertilizers and pesticides; and the lack of affordable credit. All these factors have negative impacts on small farmers in their efforts to increase productivity and generate surpluses for sale in local, regional and international markets.

World food prices are now close to their 2008 peaks. According to the World Bank, world food prices in mid 2011 are 36% higher than a year ago. These price rises are not uniform by commodity or by country. These new

highs in world food prices and their implications for small-scale farmers and livestock keepers and for poor consumers in the burgeoning cities of the developing world have not attracted as much worldwide media attention as in 2008. Throughout 2011, the world news media concentrated on a series of natural disasters (earthquakes, floods and fires) in various parts of the globe and on the political unrest throughout the Arab world. These

- **“Food has no substitute. People either have enough to eat, or they die.” – PROFESSOR IAN CHUBB, CHIEF SCIENTIST OF AUSTRALIA.**

natural disasters, record highs in food prices and political developments are interrelated. Food price increases trigger hoarding and restrictive trade policies, which in turn can cause further market responses, higher prices and more social unrest. Drought and political unrest has led to the recurrence of famine in the Horn of Africa, attracting both news headlines and emergency responses.

- “Millions of small farmers are reached commercially every day as they buy seeds, crop protection products, mobile phones ... taking advantage of the science and research embodied in these products.”  
– DR MARCO FERRONI , EXECUTIVE DIRECTOR, SYNGENTA FOUNDATION FOR SUSTAINABLE AGRICULTURE

## TOPICS

The priority topics currently identified for the research study are:

### OVERVIEW

A wider canvas for international agricultural research .

### SECURING BIODIVERSITY

Conserving and utilising plant and animal genetic resources.

### BIOSECURITY, AGRICULTURE AND PLANT HEALTH

Their importance in ensuring global food security.

### PRIVATE SECTOR R&D AND FOOD SECURITY

The current and future contribution of private sector R&D towards ensuring food security.

### NEW APPROACHES TO INTERNATIONAL RESEARCH FUNDING

Including advanced market commitments, utilised in the human health sector.

### THE SUPERMARKET REVOLUTION, AGRICULTURE AND FOOD SECURITY

Its impact on farmers, consumers and retailers; and the scope for investment by multinational supermarkets in international R&D.

### CLIMATE CHANGE, AGRICULTURE AND FOOD SECURITY

Mitigation and adaptation to climate change to achieve environmental and food security objectives; ways of drawing on the broader pool of resources that may emerge from international climate change agreements.

### COMMUNICATION OF INTERNATIONAL AGRICULTURAL RESEARCH OUTCOMES

Through public extension services, community-based organisations and private agencies; the increasing importance of mobile phones and social media as means of communications amongst farmers and communities in the developing world; and the role of public awareness campaigns in increasing international engagement in agricultural research and increased funding for national and international agricultural research systems from governments, the philanthropic sector and the private sector.

### FORESIGHT ON NEW TRENDS IN SCIENCE

Emerging trends in science, including areas of “blue sky research” with potential impact on food security in coming decades; and the challenges in ensuring the safe use of genetically modified organisms to increase productivity and sustainability of agriculture in the developing world.

### SYNTHESIS OF FINDINGS AND RECOMMENDATIONS FROM BRIEFS 1-9

Communication of key findings with policy makers; identification of gaps requiring further research.

## INTENDED OUTCOMES

- 1 Within each priority topic, to identify current gaps and areas for future investments by public and private entities in international agricultural research.
- 2 To communicate the benefits of international agricultural research more effectively and to a wider audience in Australia and internationally.
- 3 Specifically for the Crawford Fund, to inform more strategic choices of topics for future Crawford Fund parliamentary conferences and future master classes; and identify specific areas for support through Crawford Fund state and territory committees and their training programs.

As a starting point, an initial suite of emerging issues have been identified for analysis of trends and selected case studies of success and lessons learned. Other important issues may well emerge during the course of the study, and the study is open to their inclusion. The analyses will draw on the wealth of material available from the Crawford Fund parliamentary conferences 2007-11 which have addressed important issues in the food security-poverty-natural resources-environment continuum. The study will also take account of the new Strategy and Results Framework developed by the Consultative Group on International Agricultural Research (CGIAR). It will lead to a series of findings to inform the development of future Crawford Fund programs, as well as those of other partners; and to inform and influence politicians, policy makers and others with interests and responsibilities in food security, agriculture and international development.

The study will present its findings progressively through a series of briefs on the emerging trends in agriculture and food security and the role of international agricultural research. The briefs will be available at [www.crawfordfund.org](http://www.crawfordfund.org), and will be published as a series of policy briefs which

can be downloaded from the website or ordered from the Crawford Fund office. The current list of topics to be addressed is provided in this paper.

The study will build on the earlier work of the Crawford Fund, including its Food Security Taskforce and its report, *A Food Secure World: How Australia Can Help* (2008). It will also take a fresh look at these issues, including investigating the scope for new revenue streams for international agricultural research that might flow from potential investors beyond traditional donors to the CGIAR and the food and agricultural sector.

There is interest amongst some other like-minded foundations in taking a broader view of the future international agricultural research agenda. These

- **“We need to be mobilizing the power of science, together with sound economics, to lift agricultural productivity.” – BOB McMULLAN IN THE SIR JOHN CRAWFORD MEMORIAL ADDRESS 2009**

potential new partnerships are being explored, with the view to opening up new networks for the Crawford Fund to work with internationally.

Additional investment in food security initiatives is underway in Australia, through the Australian Centre for International Agricultural Research, AusAID, CSIRO and other Australian, African and international partners. The Australian Government has recently announced the establishment of a new Australian International Food Security Centre.

Several new CGIAR Research Programs have been approved for funding and implementation. Thus this study is timely for both national and international consideration. The new study will contribute towards strategy formulation for the broader issues of the future of food and agriculture in emerging economies; enhance recognition of the benefits of international agricultural research; and propose ways to involve a broader group of stakeholders in the public and private sectors, and civil society in responding to these emerging issues. •

• This brief is part of a study initiated by the Crawford Fund, and involving other like-minded foundations to analyse the effect of emerging trends in world food security, their implication for the international research agenda and potential new funding streams for such research. The study will also seek to demonstrate the benefits of investments in international agricultural research. The research study director is Dr Gabrielle Persley, chair of the Doyle Foundation, Scotland.



We welcome your comments on our research study briefs, or you may like to suggest an additional topic for a brief.

Please comment online with the project blog or in the space provided below each brief on our website.

Alternatively, you can email your comments to [Crawford@crawfordfund.org](mailto:Crawford@crawfordfund.org) with the subject line "Wider Canvas comment" ●

#### **FURTHER INFORMATION**

For further information and your input, please view our website at:

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