

EMBARGO: Sunday March 12th, 9.00 pm.

Competitive world food markets reinforce need for strong agricultural R&D

A dramatic increase in global food production over the past three decades means that Australian farmers are facing intense competition in export markets and will increasingly rely on strong agricultural R&D efforts to remain competitive, according to papers contained in the latest edition of the *Farm Policy Journal* published by the Australian Farm Institute.

The Journal contains a series of papers by Australian and international authors discussing changes that are occurring in how agricultural research and development is funded and managed throughout the world.

‘Over the past three decades, world per capita food production has increased by almost thirty percent, with most of that growth occurring in developing countries’ according to Mick Keogh, Executive Director of the Australian Farm Institute.

‘As a result, Australian farmers are facing more and more competition in both export and domestic markets, and especially from farmers in developing countries where farm production costs are much lower than in Australia.’

‘Adding to future challenges is the realisation that in the mid 1990s, for the first time the global total of developing nations investment in agricultural R&D overtook that of developed nations, and there is every likelihood of that continuing in the future.’

‘As a result, developing countries that were once significant food importers have now become aggressive agricultural exporters, and are placing increasing downward pressure on agricultural commodity prices.’

‘Australian farmers have been able to meet this competition through sustained productivity growth, driven by a relatively high level of both industry and Government investment in agricultural research and development over the past thirty years.’

‘Available statistics indicate that productivity growth in the Australian agricultural sector during the 1990s was higher than in any other sector of the Australian economy.’

‘However, according to the authors of papers in the *Farm Policy Journal*, there has been little real growth in total annual agricultural R&D investment levels in Australia since the 1980s, and the level of government investment in agricultural R&D is actually falling. There is also evidence of a reduced focus on production research, with greater emphasis being placed on environmental issues.’

‘Given the extended lag times that are known to occur between agricultural R&D investment and subsequent farm productivity growth, this raises doubts about the ability of Australian farmers to maintain the high levels of productivity growth in the future that will be necessary to remain competitive in global markets.’

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(Abstracts of Journal Papers Follow)

Agricultural R&D Spending at a Critical Crossroads

Professor Philip Pardey, University of Minnesota

Professor Julian Alston, University of California

Nienke Beintema, International Food Policy Research Institute

Since 1980 many countries have changed the ways they invest in and organise public agricultural research and development (R&D). Support for public R&D has diminished, especially for near-market, applied, productivity-enhancing research, with funds being diverted to new agendas with environmental and food quality and safety objectives. These changes have important implications for sustaining productivity in developing countries, which in the past have relied on agricultural R&D spillovers from other countries. Some developing countries are becoming more self-reliant and developing their own R&D programs. However, the more disadvantaged countries will struggle to maintain productivity growth in the face of declining applicable spillovers.

Strong Agricultural Productivity Growth Despite Weaker Public R&D Investment: Does this make Sense?

Dr John Mullen, NSW DPI

Jason Crean, Post Graduate Research Student, University of Sydney

Investment in research and development (R&D) has long been regarded as an important source of productivity growth in Australian agriculture. Perhaps because research lags are long, current investment in R&D is monitored closely. In this paper trends in public investment in R&D and in productivity growth are reviewed. In recent years investment in R&D has been flat while productivity growth has remained high. Factors that may explain this phenomenon are discussed. In Australia investment by the public sector has been more significant than in many other OECD countries. The role of government in providing research services remains under scrutiny. Some of the difficulties in research management arising from the joint provision through agricultural research of public and private goods are discussed.

The Role of Agribusiness Firms in Agricultural Research: The Case of China

Huijie Zhang, Chinese Academy of Agricultural Sciences

Shenggen Fan, International Food Policy Research Institute

Professor Keming Qian, Chinese Academy of Agricultural Sciences

In the last two decades public funding for agricultural research and development (R&D) in China reached a plateau causing productivity within the agricultural sector to diminish. Over this period there has been a rapid establishment of agribusiness firms, which have injected private funds into agricultural R&D and have offered farmers new opportunities to increase productivity and income. Importantly, these firms are changing their role in agricultural R&D and technology adoption, which has significantly affected the Chinese agricultural research system. Agribusiness firms are positioned to play a more significant role in agricultural R&D investment in China creating an integrated framework of agricultural scientific and technological expertise.

The Global Environment for Farmers and Agricultural Researchers – Famine or Feast?

Mick Keogh, Executive Director, Australian Farm Institute

Advances in agricultural research and development (R&D) over the past half century have provided the human race with a significantly enhanced ability to produce food and fibre. Despite the apparent oversupply of food, it is projected that the world's current population of 6.5 billion people will have increased to 9.3 billion by 2050, creating enormous additional demands for food. Whether this means that farmers face a world of growing agricultural surpluses or shortages is a vital question, especially in the development of future agricultural R&D programs. To assist in resolving this quandary, a number of international organisations have developed projections or future scenarios of world food and fibre production and demand. A review of these projections and scenarios provides interesting insights into potential future global developments in agriculture, and at the same time gives some indication of the likely future direction for agricultural R&D.

Public Investment in Agricultural Research in New Zealand: 1990–2005

Dr Robin Johnson, Private Consultant

Professor Frank Scrimgeour, Waikato University

Julian Manning, Waikato University

Since 1990 agricultural research in New Zealand has been dominated by Crown Research Institutes, with the four key agricultural institutes being AgResearch, HortResearch, Crop and Food Research and Landcare Research. Major reform of the public research system in New Zealand was part of wider reform of the old civil service structure of science in favour of a corporate structure of research institutes. At the same time the government changed many of the existing priorities for public investment in research, to place more emphasis on private investment, complementary funding, and new opportunities. In 2005 agricultural research interests coordinated a combined approach to government to review the system of priorities and to help raise the total level of investment in agricultural research.