

On the brink of a new agricultural 'revolution'

A leading CSIRO scientist has called on Australia's agricultural scientists, educators and industries to rise to the emerging global food security challenges.

In a keynote address to the Australian Society of Agronomy Conference, the Director of CSIRO's Agricultural Sustainability Initiative, Dr Brian Keating, said there is evidence that rates of increase in agricultural productivity are easing both in Australia and overseas.

"This is happening at a time when demand for additional food and fibre production has never been higher and supply is increasingly constrained by the availability of land, water, nutrient and energy resources and the more recent diversion of food crops to biofuels programs," Brian said.

With the United Nations predicting the world population to increase by 2.5 billion by 2050 and with dramatic changes in food consumption patterns associated with economic development in Asia, there is an urgent need to face up to the challenge of doubling food production over the next 50 years.



Dr Brian Keating.

This will require a new commitment to agricultural R&D, yet developed countries including Australia have reduced their levels of public investment over the past decade.

"We are going to need a 'revolution' in agricultural productivity over the coming decades to meet these challenges – particularly in terms of the efficiency with which we use land, water, nutrient and energy resources in agricultural production," Brian said.

In addition to these resource constraints, agriculture in Australia and globally accounts for up to one quarter of the direct and indirect greenhouse gas emissions annually.

Brian said Australian agriculture has a big challenge ahead of it as it seeks to reduce its greenhouse emissions footprint while raising its productivity levels. "On top of this, agriculture is probably the most exposed sector to climate change and Australian agriculture is as exposed as any in the world."

He says, while he is optimistic that agricultural science and industry innovation is up to these challenges, one major concern is the current low popularity of agricultural science as a potential career.

"Young people seem to want to choose a career whereby they can change the world or, better still, save the world, yet agriculture is not on their career horizon."

"They appear to see agriculture as 'low-tech' and disconnected from contemporary global challenges. The reality is they could not do better than to get involved in a science-based career that helps the world solve the pressing problems of the twenty-first century – the greenhouse effect, climate change, land degradation and global food security."

He says that while Australia tackles its own agricultural challenges and opportunities, the skills, expertise and technologies developed here have much to offer in international agricultural research partnerships.

The CSIRO Agricultural Sustainability Initiative draws on the skills of research scientists across the breadth of CSIRO to work on the productivity and sustainability challenges in Australian agriculture, forestry and land-use systems and seeks to connect these science skills with international partners in addressing global food security.

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