

# CALL FOR AUSTRALIA TO FEED THE WORLD



By MALCOLM SUTTON

**R**ESearch and development spending must increase if the world is to have a hope of feeding itself, experts say. According to speakers at a conference on food security in Adelaide on Monday, Australia feeds about 60 million people each year and its research contributes to the diets of 400m.

But they say because of population growth and the onset of climate change, Australia will need to adapt to challenging conditions to grow enough food. Its population is set to double by 2050 when 9 billion people will inhabit the planet.

This will require a bigger investment in research and development and the reduction in the time lag between agricultural R&D results and commercial application.

Waikerie cereal and sheep farmer Allen Buckley (pictured), who has hosted the Mallee Sustainable Farming Waikerie Research Site on his land for 16 years, says the success of R&D depends on its budget, but stresses that it is also vital to have farmers involved in the process.

"When a collaborative approach is taken, the package is far more marketable," he said.

"Researchers' ideas take time to trial and package, but with the help of farming systems groups, the uptake is much quicker.

"Farmers will find a way to make it work and once the trials have caught on, someone else will have a crack at it."

He says agriculture is "a moving target", and that Australia has to remain at the cutting edge.

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# Africa is a 'better investment' than land-crazy China

By MALCOLM SUTTON

CHINA'S exploding population has been lauded as an economic opportunity for Australian agriculture for much of the past decade.

The potential for hay exports to feed China's dairy industry, and perhaps less positively, real estate opportunities for landholders struggling to sell, have been well documented in mainstream media.

But according to the *Reframing the Food Security Agenda, A National Forum on Food Security to 2050* forum held in Adelaide on Monday, investment in Africa's food security would bring economic benefits to Australia as well as fulfilling its moral obligations.

Millions are starving in the Horn of Africa while productivity problems confronting sub-Saharan Africa are threatening food security for poverty-stricken people across the continent.

The United States Cornell University's applied economics professor and 2001 World Food Prize laureate Per Pinstrup-Anderson says that for Australia, Africa is a much better investment than China in the long term.

"If you're looking at the next few

## Key points

- African ag investment opportunity
- Economic benefits to Australia
- Contributes to global stability

years only, yes, working closely with China will bring a lot of exports and possibilities and it also means China is going to occupy a bit more of your land," he said.

"But imagine if you could help African governments improve their country at a 6-7 per cent annual rate. You would have an Africa that looks very similar to parts of South East Asia within the next 20 years.

"This means lot of purchasing power, lots of economic growth, and some of that purchasing power is going to be focused on importing goods and services from Australia."

Prof Pinstrup-Anderson said reducing hunger, poverty and inequality in sub-Saharan Africa would decrease the probability of conflict and acts of extremism.

"The terrorists are using extreme poverty as an argument for doing what they want to do," he said.



## Food facts

University of Minnesota Science and Technology Policy professor Philip Pardey and World Food Prize Laureate professor Per Pinstrup-Anderson (pictured), were both speakers at a forum on global food security in Adelaide on Monday.

The audience heard that the 2008 food price spike pushed about 100 million people into poverty globally and that the 2010 price spike, led by wheat, raised poverty levels again by 68m people although some 24m in developing countries came out of poverty during the same era.

In the short-term, negative food security events are predominantly caused by world weather events and natural disasters.

But market speculators and domestic protectionist measures that block exports are contributing to price spikes and insecurity, with poor people in developing countries the most likely to suffer. Australia produces only 3 per cent of the world's wheat but is the fourth largest exporter. It is the second largest beef exporter despite being the seventh largest beef producer.

"That instability at a national level is going to transfer into international instability, so I think for stability reasons, economic reasons and humanitarian reasons, Australia should continue to focus on Africa."

Australian Centre for International Agricultural Research chief executive officer Nick Austin recently returned from Africa where he spoke to key partners for the Federal Government's Australian International Food Security Centre, a \$33-million, four-year project launched in Canberra last year.

The project will bring together African and Australian scientists to improve food security and

livelihoods for African small-holding farmers.

"Africa has a high concentration of poor people and we're seeing extreme events such as massive famine in the Horn of Africa. No developed nation can stand back and say 'well that's bad luck'," he said.

"We've got to be a part of the solution there."

Mr Austin said African agriculture could benefit from Australia's enormous mining presence in Africa by taking advantage of new roads and rail infrastructure to transport fertilisers, chemicals and seeds, and to get their produce to market.

He also pointed out that eight

African countries had committed to the Comprehensive African Agriculture Development Program and would spend 10pc of their government budgets on agriculture each year.

"Ag growth is higher in Africa than it is in Australia," Mr Austin said.

"Obviously, there is a range around that – some countries are going backwards, others are going forwards very fast but on average, productivity is growing quicker in Africa.

"At the moment, Australia provides a lot of support in food aid but that's a short-term solution. What we need is their farmers to grow their own food, and we can help with that."

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# Researchers urge fast-track development of new efficient crops as A MATTER OF FOOD SECURITY

## Key points

- R&D results take decades to apply
- Sense of urgency felt
- Quick solutions needed

By MALCOLM SUTTON

**R**ESearch and development results can take more than a decade to find commercial applications, a time lag that researchers warn needs to be shortened if Australia is to tackle global food insecurity and climate change.

Speakers at the University of Adelaide's *Reframing the Agenda: Food Security to 2050* forum held at the National Wine Centre in Adelaide on Monday said drawing on R&D successes would be critical to feed the world in coming decades.

But United States University of Minnesota Science and Technology Policy professor Philip Pardey – a South Australian who graduated from the Waite Institute more than 30 years ago – said regulatory hurdles and slow market penetration were reducing the spread of new and more efficient crop varieties.

He said this was adding to research times, leaving decades to pass before new developments could be seen on-field.

"Increasingly in Australia and the United States now, we have regulatory hurdles to jump through, particularly with modern bio-tech crops," he said.

"So now you've not got just a research lag, you've got a regulatory lag in those crops that we didn't have 10-15 years ago.

"You're talking 7-10 years for most crops before you can commercialise it."

Prof Pardey said the distribution of new crops could also be dependent on how they were adapted to local agricultural circumstances.

"The uptake of modern bio-corn varieties in the US, for example, took 13 years to reach 80 per cent market penetration, compared with about 20 years for hybrid corn," he said.

"In the countries I'm working in, such as sub-Saharan Africa where you've got dysfunctional extension services, it can be much longer than that.

"That's the scale I'm talking about, and I'm worried because we've seen a ratcheting-down in Australia and



## Research ties can beat the dry

**W**AIKERIE cereal and sheep farmer Allen Buckley (pictured) has been keenly involved in research and trials for much of his farming career.

At the Mallee Sustainable Farming Waikerie Research Site based on his land for 16 years, he undertook trials on farming systems and no-till in collaboration with CSIRO and UniSA with government support.

The focus of the Waikerie site is now shifting to research on perennial shrub species for grazing opportunities while its cropping focus has moved to Karoonda where research on different soil types will continue.

Mr Buckley said there was a push to be more efficient in the 1970s and many farmers at the time doubted that was possible.

"But now, 40 years down the track, we're probably 300 per cent more efficient," he said.

"It's difficult for farmers to perceive where we can go from here. We're only using the information that we are given by researchers who are collaborating internationally to find solutions."

Mr Buckley said developments taking place overseas could be adapted to improve Australia's ability to grow food in a dry climate.

"If we can research some of those ideas on our own soils, get it into a package that can be used, then it will help everyone in the long-term," he said.

"A collaborative approach is very important."

elsewhere in the growth of R&D spending, so in a sense our future is already cast."

The results of Australia's current R&D spending would be felt strongest in 2020-30, creating a "policy dilemma" for economists.

"Personally I think there is not enough work going into scouting and adapting other people's technologies for your own purposes," he said.

Crawford Fund research study director Gabrielle Persley said Australians should build on the success of previous investments and look at ways of accelerating outcomes into practical uses.

"One of the real challenges that we should set ourselves is to try and halve the time it takes for R&D to impact," she said.

"We have to take a really good look at what research has been done and where the real opportunities are, to take potential technology through to development and speed up the process."

Living and working in Africa for the past few years had increased her sense of urgency on the issue.

"It's really important not to be designing things to death and be working on the 25th draft of some proposal," she said.

"We can set indicators for success along the way, but let's get on with it and do something now."

State Agriculture Minister Gail Gago said SA was the national research leader for grain, poultry, pork, fisheries and aquaculture, and climate adaptation.

She said it participated in a national framework to minimise duplication in R&D, and a potential merger between SARDI and the University of Adelaide would "enable the new entity to leverage Commonwealth funding opportunities".

"The government has received no specific information to suggest the State's research effort may be deficient and notes the Opposition has made no policy commitments to increase R&D spending," she said.

The 2011-12 State Budget shaved \$34.6 million from PIRSA's agriculture, food and fisheries component, including \$2.6m in cuts from SARDI's budget.

The cuts were attributed to the end of extended drought, because a significant proportion included grants and subsidy programs launched under the Exceptional Circumstances and drought response programs and the Plague Locust Emergency Response Program.

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