

Report of 16 July 2015 Meeting

Royal Society

Southern Highlands Branch

Speaker: Dr Brian Keating, Executive Director, CSIRO Agriculture, Food and Health Sector.

Topic: Food Security in a Changing World.

Dr Brian Keating surprised his 61 member audience with the question as to whether they felt the “mining boom” had been replaced by the “dining boom”. This question raised a good deal of interest in the attendees who had come to hear about global food security. When told however that the question was prompted by the fact that last week in Beijing, the cost of a tonne of cabbages had for the first time exceeded the cost of a tonne of steel, people realized that they were about to take part in a very fulfilling lecture on food availability and the factors controlling it.

Dr Brian Keating opened his lecture formally with the FAO definition of “food security” that he would be using throughout the evening. He described food security as existing when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

From 1960 to 2000, the Green Revolution more than doubled crop yields in much of the world, and while population rose by 98%, food production per capita still rose by 24%. This meant land cultivated for agriculture rose by only 8%, sparing land, water and biodiversity around the world. Still, over 800 million people remain food insecure and the Green Revolution is yet to fully reach sub-Saharan Africa. The food price crises of 2007-2008 and 2010-2011 provided a timely wake-up call that food security in the 21st century is not assured with demand growth forecast in the range 50-80%.

The suggestion is often made that Australia could become the food bowl of Asia, but Brian Keating says that a reality check is called for when those claims are made. Currently Australia grows 1% of the world’s food. This rises to 2% of all traded food. Production increases are possible from existing industries and areas, and agricultural expansion in Northern Australia is possible. However overall contribution will still be modest. He said that we must remember that we compete on a global stage and productivity growth will determine whether we can capture the opportunities. He said it may be more appropriate for us to see Australia, not as the food bowl of Asia, but maybe the delicatessen.

There are multiple dimensions to the issue of food security, a major one being the utilization of the food. Food processing, storage, waste, safety, nutritional value of diet and health outcomes are all factors here. Dr Keating stated that it is estimated that 40 % of available food is wasted, a dreadful statistic. In the modern world we have only to look

at the amount of food we throw away from our refrigerators, and then consider the proportion of unopened cans and packages we discard because of the use-by date. In more primitive societies, it is commonly seen that what was thought to be a good crop rapidly diminishes in food value due to the inadequate storage methods available.

In concluding his lecture, Dr Keating outlined the challenges that lie ahead in this very difficult and constantly changing field. He said that the absolute increase in food demand over the next 40 years is a little greater than was the case for the Green revolution, but that the rates of yield gain have been declining, and new land and water sources are more difficult to sustainably develop. He added that we have reduced our investments in agricultural development and that lead times are long. In addition we have to deal with uncertainties arising from climate change. A very well received lecture.

Anne Wood