

Feeding, fuelling and healing the world

George Freeman

The developing world (the 'BRICs' and next 11 economies identified by Jim O'Neill at Goldman Sachs) will in the next 50 years go through what the developed world has gone through in the 300 years since the Agricultural Revolution. This explosion in global population and living standards is going to place significant strains on global resources, particularly in regards to food, medicine and fuel, the three core 'life science' markets, creating enormous new markets for UK science and innovation. I believe the UK faces an extraordinary opportunity to support and lead a new phase of global sustainable economic development. It can do this by unlocking the value of our Knowledge Economy to help create innovative technological solutions to these 'Grand Challenges' facing our generation.

As the Foresight Report set out so powerfully in 2011, future demand on resources will be influenced by complex economic and social drivers accelerated by population growth. As the report shows, by 2030 the global population could be as high as eight billion and by 2050 as high as nine billion, creating significant global resource pressure. By 2050, we will need to produce roughly twice as much food using roughly half as much land, water and energy.

By harnessing our world class science and research base in developing an innovative and entrepreneurial knowledge economy, we have an opportunity to attract major inward investment to the UK research base and fuel an ever larger cluster of entrepreneurial companies developing technological solutions and exporting them globally. We can build trade links with emerging economies and lay the foundations for a sustainable economic recovery, for them and us. We can also restore the UK's historical leadership on these global challenges and establish a strategic role in the new world order, inspiring public confidence in the Prime Minister's statement on the steps of Number 10 in May 2012 that "our best days are ahead of us".

I believe Science and Research are key to us 'winning in the global race', especially in the appliance of science to the key markets of food, medicine and fuel which underpin the fast-emerging global bio-economy. That is why I was delighted to be asked by the Prime Minister and David Willetts to become Government Adviser on Life

George Freeman is MP for Mid-Norfolk, Government Adviser on Life Sciences and Chairman of the All-Party Parliamentary Group on Science and Technology in Agriculture. Before entering Parliament in 2010 he had a 15 year career in biomedical venture capital. As Government Adviser on Life Sciences he has worked closely with the Department for Business, Innovation and Skills (BIS) and the Department for Environment and Rural Affairs (Defra) in coordinating the Government's Ag-Sci Strategy. He has spoken and written widely on the potential of UK agricultural science, technology and entrepreneurship to lead a sustainable economic recovery.



Sciences and help develop an appropriate long term policy framework.

In 2012, the Prime Minister launched a new medical Life Sciences Strategy focussed on our biomedical sector. This year will see a similarly ambitious strategy for the Agri-Food sector. At its heart is the idea that by integrating our research base with our industrial supply chain (in this case our world class food and farming sector) and better integrating our aid and trade missions through the Department for International Development (DFID) and UK Trade & Investment (UKTI), we can attract significant investment into the UK as well as achieving export-led growth.

The UK has not had a coherent Agri-Food strategy for decades, but the imperative to unlock new models of economic growth creates a real opportunity. The new Agri-Tech Strategy is being put together by the Department for Business, Innovation & Skills (BIS), the Department for Environment, Food and Rural Affairs (Defra) and the Department for International Development (DFID), with strong support from No 10 and No 11. The aim is to set out a coherent vision in order to create a more integrated ecosystem and so promote greater collaboration between our food and farming sector and our research base.

Over the next decade we should be unlocking an increase in private-sector and global-sovereign investment in our research, focussed on the challenges that UK and world farming faces in the years

ahead. We want to see the UK become the place where venture capital finds, funds and develops the latest agricultural innovations. We want our food and farming sector to draw on UK science and innovation as it seeks to produce 'more from less', in a more resilient and sustainable model of agricultural productivity. We want all of this to benefit our country by attracting additional inward investment and export through both aid and trade.

The Prime Minister is committed to using his position as Chair of the G8 to drive forward British leadership in tackling world hunger and the scourge of food insecurity. The Agri-Tech Strategy aims to set out the way we see this country growing this sector of our economy, while at the same time delivering on our commitment to the developing world. Our aid and trade missions can and must go together. Trade, especially in the basic primary markets that kick start the economic development cycle, is the best form of aid. These challenges may seem great, but through our scientific, entrepreneurial and global leadership this strategy can benefit the UK taxpayer, its consumers and our cluster of world-class researchers and entrepreneurs – as well as those in the emerging economies of tomorrow.

The challenges of economic recovery we face in our own economy, and the challenge of resilience facing the rapidly emerging developing world, are two sides of the coin of opportunity. Science and technology are the keys to unlock it. □