



Food for Thought

Gordon Gatward offers some scientific and biblical insights on the sustainability of farming and food production today.



Gordon Gatward

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In March 2009, Sir John Beddington, the Government's Chief Scientific Adviser, addressed the Sustainable Development UK Conference. The starkness of his message was summarised in one statement: 'It is predicted by 2030 the world will need to produce 50 per cent more food and energy, together with 30 per cent more available fresh water, whilst mitigating and adapting to climate change. This threatens a perfect storm of global events.'

The evidence in support of Sir John's assessment of future food needs is only too clear. The world population is projected to peak in 2050 at between 8 and 10.5 billion. As the current global population is 6.8 billion this means that, over the next 40 years, world agriculture will have to produce enough food for an extra 2 to 4.5 billion people. Of that current 6.8 billion, a sixth are already going hungry. The uncomfortable truth is that we're not able to cope with the current demand for food, let alone being able to meet the needs of an ever-increasing global population.

This is but part of the problem, for the resources available to produce the extra food that is needed are steadily being depleted – usable land, water and oil. The availability of each of these is decreasing at an alarming rate.

Beddington's 'perfect storm' is not a prediction about the future but a statement about the present. The effects are already being felt and although some are suffering more than others (as always it is the poorest and most vulnerable who are suffering most) everyone is being and will be affected. Everyone therefore has a stake in finding solutions and those solutions must be centred

on agriculture. It is farmers who will grow the extra food that is needed, who will have to adapt their practices to work with less resource whether soil, oil or water. Farmers already manage a large part of the world's natural environment and will have to learn new skills and practices to meet changing needs and demands. Farmers are also a major contributor to the conditions that create climate change and as a result are going to have to dramatically alter some current cropping and stocking methods. Our future depends on agriculture and all those involved in it.

In the search for alternative and sustainable forms of energy, agriculture is a key player. Wind farms, bio-fuel crops and even anaerobic digesters, are becoming an increasingly familiar part of the rural scene and a major source of contention in debates about agricultural policy. Agriculture's role in managing the environment for the wider public good is now fully recognised in the system of support payments and will be at the heart of the reform of the Common Agricultural Policy (CAP), the system of subsidies and programmes under which European farmers work. CAP covers farming, environmental measures and rural development, and controls European Union agricultural markets. The European Commission (EC) is planning major changes to the way CAP works, with member states currently negotiating the proposals that are due to come into force in January 2014. There is growing awareness of the role farmers have in managing the carbon stored in peat bogs and moorland. Measures are being put together to reduce agriculture's contribution to the conditions that cause climate change and to ensure greater efficiency

in its use of natural resources. It is in the area of food production, however, that it has the key role.

The late Norman Borlaug was described as the 'father of the green revolution'. He developed countless new strains of wheat that could survive diseases and conditions that previously devastated crops. His obituary stated that 'up to a billion people might have starved were it not for the patience and ingenuity of his efforts'. Current agricultural technology and the scientists who have succeeded Borlaug can achieve equally spectacular results. New strains will have the potential to dramatically increase yields. and new varieties will be developed that will be able to grow in adverse or impossible environments. This was recognised by Beddington in his paper to the Sustainable Development Conference: 'We need a new greener revolution . . . Important areas for focus include: crop improvement to increase yields and tolerance to stresses such as droughts, smarter use of water and fertilisers; new pesticides and their effective management to avoid resistance problems; introduction of novel, non-chemical approaches to crop protection; reduction of post-harvest issues and more sustainable livestock and marine production.'

This can only be achieved if there is renewed investment in research and development and a greater public willingness to accept emerging technologies. Issues such as the use of Genetically Modified Organisms (GMOs) in agriculture and food production still need to be resolved and the related theological debate still needs to be concluded.

However, it is not only the GM issue that requires further theological debate and consideration. Everything discussed so far has a theological dimension and all of the issues need to be considered in the light of Scripture. The concept of responsibility for others that is summed up in Jesus telling of the Parables of the Good Samaritan (Lk 10) and the Sheep and the Goats (Mt 25), the understanding of service to others conveyed in the acted parable of Jesus washing the disciples' feet (Jn 13), the principle of sacrificial love displayed on the cross and vividly set out by Paul in 1 Corinthians 13; these and so many other passages challenge the temptation to close our minds to the implications of Beddington's warning. Scripture reminds us that how we live, what we decide and what we do, affects the lives of countless others around the world and the environment in which they live (e.g. through climate change and the depletion of natural resources, including water). Scripture also reminds us that we face the judgement of God. As Psalm 24 records, 'The earth is the LORD's, and everything in it' (v. 1), and we are accountable to him for how we use it and what we do with it.

Genesis 2 records that 'the LORD God took the man and put him in the Garden of Eden to work it and take care of it' (v. 15). This suggests that we have a twofold God-given responsibility to manage the land for food whilst also caring for its environmental integrity. This biblical understanding of sustainable food production must be at the heart of our response to Beddington's warning.

Much of the discussion about sustainable food production naturally focuses on environmental issues. To achieve a sustainable agricultural industry, however, society also needs to recognise that a farming business has to be economically, socially and spiritually sustainable. This requires fairness in the market place for all producers, recognition and appreciation (including financial) of all the services provided and a commitment to pray for those who work the land.

It needs to be expressed in greater recognition of our dependence on those who produce our food, and a deeper appreciation of how they do it. There has been a widespread loss of confidence in farming as a profession.

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In the UK alone, the Royal Agricultural Society of England estimated in 2009 that 'farming will need in excess of 6,000 new entrants a year for the next 10 years, if it is to survive'. With the average age of a farmer at 58, it is essential that agriculture attracts able and committed young people who are keen to respond to the challenges outlined above. That will only happen when society recognises that there are few professions that are more challenging, rewarding or critical to our survival.

A further consideration regarding the spiritual aspect of sustainability is spelled out in Deuteronomy 8.11–19. The writer addresses a well-fed and self-contented nation: 'Be careful that you do not forget the LORD your God ... Otherwise, when you eat and are satisfied ... then your heart will become proud and you will forget the Lord your God ... You may say to yourself, "My power and the strength of my hands have produced this wealth for me" ... If you ever forget the LORD your God and follow other gods and worship and bow down to them, I testify against you today that you will surely be destroyed.'

Ignoring our ultimate dependence on God is to court disaster. Many would say that this has been happening for many decades with regard to our attitude to food and those who produce it. Many politicians, consumers and agriculturalists continue to behave as if there is an unending source of food and ceaseless possibilities of ever-increasing yields. All of this has contributed towards Beddington's 'perfect storm'. While I have argued that we can find the means to mitigate some of its effects, I believe that nothing we do is likely to be truly effective until there is a renewed sense of humility before God and a deep awareness of our dependence on him for our means of survival. This is the very foundation of sustainability.