

## **Final orders in the era of cheap and abundant food**

*By Prof. Gareth Edwards-Jones*

Chinese, Italian or Indian? The choice is made across Wales most nights of the year. Everyone under 50 has lived in a world where food has been more available and much cheaper than ever. But times are changing, warns Gareth Edwards-Jones

Throughout the 20th century the real price of food fell. There was one blip in the mid-1970s when the increasing price of oil forced up the price of all other goods to uncharacteristic highs.

But in recent months the price of food has suddenly increased, and is now approaching that 1974 high again. What has caused this?

Some observers look east. As more Chinese get richer so they demand more meat in their diet. Chicken, pigs and some beef are fed on grain, so the global demand for grain goes up. There are similar trends in all developing countries, but this has been happening for decades. So while economic growth in China is an upward pressure on food prices it is not the cause of the recent sudden surge.

Neither is the weather a major factor. There were some poor harvests in Australia last year, but the overall cereal harvest for the globe in 2007 was the highest ever recorded. It seems to be an economic impossibility – highest-ever supply and also highest-ever prices. What, then, is going on?

The answer is biofuels, particularly in the USA. Bioethanol is made from maize, and under a very pro-bioethanol policy huge areas of American cropland have suddenly gone out of food crops and into maize.

As a result the amount of wheat available on the world market is reduced, and by chance world wheat stocks are also at their lowest point for 40 years.

Food stocks are usually expressed as the percentage of annual consumption, and experts suggest that there are no major problems as long as stocks stay above 25% of annual consumption. Since 1960 they have bounced around the 30% mark. Now they are below 18%.

So if no wheat were produced anywhere in the world this year the stocks would keep us fed for about two months. This may well be a real cause to worry, particularly in light of the old adage that all civilisations are only four missed meals away from anarchy. With this thought in the back of their minds, people are now thinking seriously about food security for the first time since the 1950s.

Imagine a future world where, for political reasons, the USA continued a policy of reducing its reliance on imported oil and vigorously promoted biofuels to provide energy, while also growing food primarily for home consumption – not releasing any surplus onto the world market.

At the same time EU relations with Russia and other central Asian states reached an even lower ebb, while China and India put on a spurt of economic growth, thereby demanding more food.

Finally imagine that climate change in key production areas like Australia reduced world production. While these four things may not immediately lead to food scarcity in the EU, they would serve markedly to reduce the resilience of the global markets.

Supply and demand in the EU would be on a knife edge. All that would be needed to enter crisis would be reduced yields in the remaining stable markets – an outbreak of a crop disease in Canada or some bad weather across Europe. Then the price of basic grain would skyrocket and supply may not meet demand. Other food chains, such as poultry, pigs and beer, depend on grain as a basic input, and here too prices would soar and supply would drop.

Quelling a hungry mob in a situation like this must be every politician's nightmare, and traditionally they do all kinds of things to avoid this.

Sometimes they try to control the prices of food, as is happening now in Russia, Venezuela and China. Or they try to reduce food exports and increase home production.

A few years ago the Syrian Government was so obsessed with being self-sufficient in food that it designed the country's entire agricultural system to avoid it.

Farmers were more or less commanded to grow a certain amount of so-called strategic crops – wheat, barley, sugar beet, lentils, cotton and tobacco – and a whole administrative system was designed to enforce this National Plan.

The root of the Syrian's desire for self-sufficiency was fear of political blackmail. The standard narrative among the chattering classes of Damascus was that during the first Gulf war Egypt, which has the lowest amount of arable land per capita of any country in the world, was persuaded to let Allied nations use their airfields on the threat of reduced food imports. Avoiding similar blackmail from the West is fairly high on the Syrian political agenda.

In a worrying parallel to the Syrian world view, senior Welsh politicians have previously tried to rally support from groups of farmers with their cries for a self-sufficient Wales.

While this may make good political capital, with current technology it's biologically improbable. There is simply not enough good quality land in Wales to supply the staples of bread and potatoes.

So while self-sufficiency could supply four or five lambs a year to all Welsh citizens, there wouldn't be much else on the plate. A short term "dig for victory" type burst of production may be possible, but maintaining high levels of production would be disastrous for the environment. Soils, water and biodiversity would all suffer in the food rush.

Indeed the very same is happening in Syria. Water is getting scarce as aquifers are pumped and the soil is quite literally blowing away. Put simply, achieving self-sufficiency in countries with inappropriate natural resources is not environmentally sustainable.

So what to do? Well at the Welsh level there isn't very much that can be done. At the UK level we need to maintain the capacity for food production. The continuous decline of agriculture and food sciences in our universities is probably not a good sign, and neither is the increasing scarcity of people who actually know how to rear crops and animals.

We may also need to think about the food processing infrastructure. Where are the abattoirs and grain mills and how long will they be there?

Finally, the ability to cook meals from basic ingredients may in the future be an essential skill that keeps folk alive. So let's welcome cooking back on to the national curriculum with open arms.

In Victorian times culinary ability and general thrift were desirable attributes in any prospective wife. They may be again if food security in the 21st century becomes as uncertain as some analysts think.

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