

# Back to the Land

*Food, Climate Change and the Coming Energy Crises.*  
by Graham Stouts

Some years ago a friend in Mayo told me she had been visited by a neighbour of hers, a farmer, who was curious to see what she was doing planting potatoes in her garden. Apparently the neighbour farmer could not understand why on earth she was going to the trouble and hard manual labour of digging beds and setting seed potatoes when they were so cheap to buy.

In recent years farming has become defined more and more by the availability of grants and subsidies, and by the dictates of international trading agreements. One of the consequences of this is that individual farms are producing an ever diminishing range of products for an increasingly global market.

Simultaneous to this, the home garden has become a fashion extension of manicured lawns and clipped shrubs. Growing food has become a special-interest hobby or is viewed as some kind of regressive primitivism which swims against the tide of lawnmower culture now becoming prevalent in the suburbs. Across the water, the easy complacency which surrounds the supply of food was severely tested in September of 2000 when after just a few days of a nation-wide truckers' strike, many parts of the UK found themselves

facing what has become unthinkable in modern times: a shortage of food. Once the deliveries stopped arriving, it was only a matter of days before the shelves were emptied. Since little food was produced locally, it quickly became apparent that there really was no other source of food available.

Modern farming and globalised systems of trade have created a situation in which we are perilously vulnerable to political and environmental factors quite beyond our control. Unless we start taking this issue seriously and make dramatic changes to the way we think about and produce food, we are facing the increasing likelihood of food shortages and yes, famines, even in the most developed and 'modern' parts of the world.

## Food and Fossil Fuels

When people think of energy shortages and the effects of rising energy costs, they tend to think of possible blackouts, or rising prices at the petrol pumps. Much more fundamental than these consequences, however, will be the effect on our food supply, not simply because of possible interruptions in transport, but because, since the 1950s, food is fossil energy:

*"The Green Revolution increased the energy flow to agriculture by an average of 50 times its traditional energy input. In the most extreme cases,*

*energy consumption by agriculture has increased a hundredfold or more. In a very real sense, we are eating fossil fuels". (1)*

One of the most significant developments in agriculture in the past 150 years was the Haber-Bosch method of manufacturing ammonia fertiliser from atmospheric nitrogen and natural gas. Nowadays the production of artificial fertilizer represents around one third of all the energy used in modern agriculture. Another 8 percent is used in the manufacture of pesticides from oil. Finally there are the liquid fuels used in farm machinery, transport, packaging and food processing. Today, an average of ten calories of fossil-energy are used to produce just one calorie of food. (2)

This transformation of agriculture is believed to be one of the main factors behind the exponential increase in the world's population. There has been a doubling in the last thirty years and a six fold increase since the beginning of the Industrial Revolution. The use of fossil-based fertiliser and pesticides has permitted the feeding of at least four times the number of people from the same amount of land than 'traditional' methods of agriculture (3) When people talk about 'Climate Change' the concerns expressed are often to do with the economic impact of changing climate or of extreme weather events like hurricane Katrina or the January storms in Europe this



The days of importing grain from thousand of miles away may soon be over.

year. The gravest effects of a more unstable climate on the developed nations, however, will be in relation to food production.

Much of Europe's food is imported from distant countries already under increasing environmental stress for other reasons, including topsoil loss and water shortages. Farming depends on a stable climate, and as weather patterns across the world become less predictable, we will find we can no longer rely on the rest of the world being able to produce our food for us. The urgency of this situation has recently been highlighted in a report by Caroline Lucas MEP of the *European Green Party*, who writes:

*"The Common Agricultural Policy must be replaced by a policy framework that minimises fossil-fuel use through a prioritisation of self-reliance so that Europe can meet this new challenge head-on, delivering food security into the future". (2)*

The task is enormous, because what is required is a complete reversal of the policies which have defined agriculture during the last 50 years. These policies lead to a massive movement away from the land and to an increased dependency on imports. In response to this, there needs to be a massive cultural shift towards local food production. The impending peak in global oil and gas supplies means this transformation needs to begin now: an energy crisis will mean a food crisis.

## Moving Forward

There are a number of steps which can be taken at an individual, community and national level in Ireland. Key areas include the following:

### Education

Sustainable agriculture requires far more skills and human labour than industrial systems, and a much greater number of farmers and gardeners to participate in it. Educating for this new enlarged workforce should begin as early as possible. Gardening and horticultural activities should become an integral part of every school and educational establishment. The large

areas of green space around schools and universities should become places for food production and crop research.

### Tree Crops

Perhaps one of the most exciting areas for developing new forms of food production is nut trees. Cob nuts and filberts (larger relations of the native hazel) do very well in most lowland areas of Ireland and recent research suggests that viable crops of walnuts and sweet chestnuts may be achieved in the drier and warmer parts of the country. Yields of around 3-4 tonnes per hectare are achieved in other countries where walnuts and chestnuts are planted on a large scale. Given the high protein value of nuts and the possible integration of nut production with low density grazing of livestock, the potential benefits of indigenous nut production are too great to ignore. State funding should be provided for further research in this area, to determine which cultivars are most suitable for the Irish climate. (visit [www.woodkerne.net](http://www.woodkerne.net) for details of Irish research into nut production. Cob nut trees are available mail order from the Sustainability Institute)

### Heritage Seed Varieties

One of the effects of globalised, industrial, agriculture has been the tragic loss of the great diversity of seed varieties once common in traditional systems (3). An essential part of local food production and food security is the ability of farmers and gardeners to save their own seeds, and develop the skills to breed new varieties. The principle organisation devoted to the preservation of seeds in Ireland is the *Irish Seed Savers Association*. This important non governmental organisation deserves far better support and funding. See: [www.irishseedsavers.ie](http://www.irishseedsavers.ie).

### Productive Urban Landscapes

In response to the greater urbanisation of our society, we need to develop strategies for producing more food in our towns and cities. There are many opportunities for this: community gardens, allotments, city farms and back yards. Andre Viljoen (4) has written

of the "continuous productive urban landscape" which he believes will be an integral part of urban design in the future.

### The Intensive Home Garden

During a visit to Slovenia in 2005, I was struck by the prevalence of the home food garden. It appeared more common than not to find food gardens outside the front and back doors of apartment buildings and private houses, even in the city. A stroll around the area in the evening would find people gently hoeing their plots while chatting with the neighbours. Interestingly, none of this seemed to be at odds with the accoutrements of modern life such as TVs and mobile phones! There is no expectation that we will all be growing all our own food, but in the future far more people will need to be involved in local food production than is presently the case. Many people could become involved in home food production, even if this is only growing tasty salad crops in a window-box.



### Local Food Plans

Permaculture students in *Kinsale Further Education Centre* are working on producing a Local Food Plan. This will look at various different aspects of food production in and around Kinsale. The proposals include community and school allotments, orchards, composting banks, and the development of a long term food production and security strategy for the area.

Ireland would be well served by having its own local food-production culture. Probably the most useful life skill we can teach our children is how to grow food.



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### References

- (1) Dale Allen Pfeiffer, *Eating Fossil Fuels: Oil, Food and the coming Crises in Agriculture*, New Society Publishers 2006
- (2) Caroline Lucas MEP, Andy Jones and Colin Hines, *Fuelling a Food Crisis: The impact of peak oil on food security*, [www.energybulletin.net](http://www.energybulletin.net)
- (3) Richard Heinberg, *Threats of Peak Oil to the Global Food Supply*, [www.richardheinberg.com](http://www.richardheinberg.com)
- (4) Andre Viljoen, *Continuous Productive Urban Landscapes* Architectural Press