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# Peak Oil

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## The issue

- the subject of "Peak Oil" concerns the forthcoming peak and ensuing gradual run-down in global oil supplies, as the exploitation of existing oilfields is not fully compensated by supplies from new oilfields
- the oil industry's reserves are highly overstated in public. Analysis of the figures shows the point of peak supplies is likely to be by 2008
- contrary to popular opinion, new technologies such as 'enhanced recovery' and alternative oil sources (such as tar sands) are not a solution (eg. the latter is very energy intensive). These are already included in the 2008 peak estimate.
- the increasing oil shortage will be compounded by the structural crisis that the industry already now faces, where it needs to make a massive infrastructure investment just to keep up with supplying the rising global demand for oil
- the societal effects of the growing shortage will be compounded by the reactions of the stock market on oil prices and political responses to the crisis
- major global economic shocks in the near future seem pretty much a certainty and society is not prepared.

## Peak Oil and nitrogen fertiliser

'Peak Oil' will substantially affect agriculture, as many aspects of industrial production are energy intensive. In particular, Peak Oil will affect the viability of N fertiliser, because 'natural gas' is the basic chemical from which nitrogen fertiliser is produced, and there are no realistic alternatives. The use of fossil fuel energy for nitrogen fertiliser accounts for 37% of the total energy used by UK agriculture and its price tracks the price of natural gas. UK nitrogen fertiliser prices are rising significantly and are the highest they have ever been.

Organic farming is more energy efficient. Detailed life-cycle studies for the UK Government show that, on average, organic farming requires about 15% less energy to produce the same amount of food. Typically organic farming is around 30% more energy efficient, but is less energy efficient for poultry and glasshouse vegetables. The main reason for its lower energy use is because it uses organic matter and soil biology for crop nutrition, instead of energy-intensive fertilisers.

## Implications of Peak Oil for society and the Soil Association

On the one hand, the increase and greater volatility of oil prices, and increasing physical shortage of oil could significantly change the social, economic and political context in which the organisation does its work, making our work much more challenging:

- severe and prolonged global economic recession (ie. unemployment, low incomes/high cost of living, low expenditure, less business opportunities etc.). This could mean a fall in sales of more costly organic food.
- severe impacts on Western lifestyles (high cost of transport, food and other goods). This could lead to increasing social unrest, such as fuel riots.

- short-term and increasingly nationalistic Government policies which can detract political attention and funds from other issues (such as, more war in the form of foreign invasions to secure energy supplies)
- significant pressure for Government investment in securing conventional and centralised energy sources, ie. nuclear and coal, which could slow the transition to renewable sources
- significant pressure for Government subsidies to support energy-dependent industries, such as industrial farming
- in response to the worsening economic climate, more pressure to exploit natural areas and general downward pressure on environmental protection
- change or even possible reversal of the comparative power and stability of countries, with those that are more 'developed' and thus more dependent on fossil fuels and trade, becoming less wealthy and stable
- changes in strategic alliances between countries, leading to different political influences and trading arrangements

On the other hand, Peak Oil should support the realisation of the organic movement principles with an increasing move away from centralised and fossil fuel based food systems, and a general move to self-sufficiency and more natural systems:

- rise in agricultural input prices, so reduced use of fertilisers & other inputs
- more organic farming, because of greater comparative economic viability and greater interest in non-fertiliser based production. At some stage, organic food could become cheaper than non-organic which would significantly increase sales
- more composting and use of sewage sludge, as alternatives to N fertiliser
- rises in the cost of food processing and packaging (especially plastic), should lead to less processed food and reduced viability of supermarkets and more whole food (though food companies could react by investing in renewable energy)
- less imported food especially less air freight, so there will be more local food
- economic pressure on the intensive indoor livestock sector from increases in the cost of electricity, so there will be more outdoor rearing (and/or rise in use of anaerobic digestion)
- economic pressure on out-of-season indoor glasshouse horticulture, which is highly energy intensive, will mean greater seasonality (and/or rise in combined heat and power (CHP) which is a form of efficient low-carbon generation of energy, where the heat produced during the electricity production is used for heating.
- reversal of the trend towards ever larger and more centralised industries and multi-nationals, because of higher transport costs and an increasing need to secure local energy and other resource supplies. Therefore, more localised economies.
- greater interest in individual, community and national food self-sufficiency, ie. allotments, Community Supported Agriculture, direct sales, forward contracts
- rise in individual and company energy conservation and self-sufficiency measures, ie. wind turbines, solar panels, local biomass, CHP etc
- less use of machinery and rise in the value of human labour (possible rise in interest in horse-power).

How can I support the work of the Soil Association?

The Soil Association is a membership charity, we urgently need your support to continue our work. As public support for the Soil Association continues to grow, our ability to influence the thinking and policies of government and big business grows with it. In this way we help to develop a truly healthy and sustainable future. Join us today and help us to continue campaigning for sustainable agriculture and organic food. You can join the Soil Association on our website, over the phone or by writing to us.

## Further Reading

Please see the Soil Association website library, <http://www.soilassociation.org/library>, for more information

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