



SEARCH



On January 17th 2014 a demonstration took place outside the Greenpeace offices in Hamburg.

It was led by a group of scientists who were protesting against Greenpeace's opposition to Golden Rice. This is genetically modified rice that provides a rich source of Vitamin A (as  $\beta$ -carotene), essential for human health but not sufficiently available in the diets of many poor people whose staple food is rice.

Greenpeace's resistance to genetically modified food has taken the form of political action which has resulted in legislation to restrict use of GM crops and their produce in Europe . Their action is also associated with demonstrations against field trials of some modified crops, some leading to the destruction of experimental plots.

It seems that the future for genetically modified food has become a contest to manipulate public opinion. Within the debate both sides claim that 'science' supports their position.

World Agriculture has welcomed authoritative papers from a leading opponent of GM technology, Dr Helen Wallace and from scientists who advocate its acceptance

and practical use. In this issue we include a critical analysis of Dr Wallace's paper by Professor Anthony Trewavas and Martin Livermore BA (Oxon), Director, The Scientific Alliance and Dr Wallace's response.

The issues involved are of global importance, especially for poor people. Growing population, the probability that global warming will diminish the productivity of some major food producing areas and the pressure to grow crops for fuel will limit food supplies. Rising real incomes among some populous countries where diets are being upgraded suggest that real food prices will rise.

For those whose incomes do not keep pace there is a prospect of growing hardship and for those who lack resources either to grow or buy food, an increased risk of starvation. The world needs every means at its disposal to produce a sustainable and sufficient increase in food output.

Those who support GM technology believe that its use can make an important contribution to relieving this pressure. Several claims are involved. It will be possible to produce GM crops that can cope with less favourable growing conditions, including higher temperatures, less water and shorter growing seasons.

Using the technology plants can resist common pests and diseases without the use of chemicals that can pollute the environment and are, in their production and application, energy intensive.

The implication is that more food output would be possible using fewer resources than current production systems. The modification of plants may also improve their nutritional quality, for example in golden rice. Thus, the use of genetic modification is expected to make a direct contribution to improving human health and wealth.

As with any new technology it is impossible to know fully the possible effects it may have, especially in the longer term. In this area, as in all others, our knowledge is provisional and will be enlarged by later research and analysis. Given so potent a new technology it is natural that many wish to proceed slowly rather than unleash forces that later prove to be damaging and uncontrollable. We have therefore to take seriously those anxieties that do surface, whether these arise from scientific critiques, from social concerns or because new technologies infringe ideological convictions.

In each of these areas of concern serious analysts can honestly come to differing conclusions. In such a situation it is vital that each explores the position of others in

order to discover where the real disagreement originates and thereby to understand more fully the issues at stake.

World Agriculture & Environment seeks to encourage such a discourse. We are grateful to the contributors to this edition for setting out their positions with clarity. It moves the debate from the barricades to a more rational and more productive form of discourse.

We would welcome further contributions that take the discussion further. Such a conversation is helpful to those who are not themselves expert in genetic modification or involved in its commercial exploitation but have to take decisions which will determine our capacity to cope with the looming problem of global food shortage.

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 [Professor Sir John Marsh](#)

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## Comments

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