

that any hybrid would have no genetic advantage and if normal crop rotation is practised they would not persist when different crops were planted in subsequent years. This is just one example, however. No one can rule out the possibility that eventually some GM crop or combination of crops may produce an unintended variety that does persist to a significant degree in the environment. Whether you see this as an overriding problem against the development of GM crops is not a question of science but of perception and evaluation. This in turn raises some important questions about values.

Risk Aversion and Technology

Since the BSE crisis people have become a lot more wary of food risks and are distrustful of the assurances of Government and the scientific community. This is part of a wider trend in UK society. Events like thalidomide, DDT, Chernobyl and global warming have eroded confidence in technology. Instead of optimism about progress through science in the decades following the second world war, new developments are increasingly seen in terms of risk. This is deeply ironic. The very success of technology in combating many of the hazards of life means we are less aware that life is inherently risky. We don't appreciate how unusual and privileged it is to experience such a low level of natural threats to life. To most earlier generations, crop failure, child mortality and epidemic were facts of life. Today when something goes wrong, it comes as a disruption and we look indignantly for a scapegoat, forgetting that risk is part of normal life on the planet. Part of coping with the shock has been a nostalgic illusion that natural is always better than human intervention, and the past safer than the future. What is natural is no guarantee of safety. There never was a golden risk free age.

What Role for Precaution?

So when people talk about precaution over GM crops or any other issue, what do we mean? It doesn't mean, "If there's even the slightest doubt, don't!". Most risk is calculated from past disasters. There hasn't been one for GM crops, so risk assessment has to consider speculative "what if?" scenarios, notoriously hard to calculate reliably. The precautionary principle means if this gives good reason to foresee a large enough risk, we shouldn't wait till all the data have come in to confirm it, before taking measures to address it. Global warming is the classic example. The question for GM is : "Is it such a big risk to say no, absolutely, on precautionary grounds, or at least to slow down till we have more data?" But the call for a GM moratorium was too vague. No one said exactly what environmental information would make the crucial difference, to determine if GM crops could go ahead or not. And even if we had years of field trials, we would probably not have removed all the uncertainties. At some point we would have to make a judgement on incomplete data. That means a judgement about precaution, which depends on your values. Those who see an urgent need to abandon intensive agriculture for more "sustainable" approaches have a clear risk valuation. Those dubious that organic agriculture can feed 8.5 billion people next century have another. The Church of Scotland argues for selective precaution, not a blanket "no". Some GM applications might be too risky, but others have a very low risk and could be acceptable. This view comes from a Christian understanding of risk.

God, Risk and Human Nature

We think some gene technology can be part of God's calling to humanity, not intrinsically opposed to God's wisdom. We are deeply sceptical of scientific and commercial-based claims of human mastery or laser precision modification, which focus on the desired product, oblivious to wider effects. But human nature works both ways. We can ignore risks that we do not want to see, but we can also wildly exaggerate what we are fearful of. "Natural" ways are not necessarily safer. God created a risky universe both in inherent hazards in creation and in the risk of human creativity, artistic and scientific, which will always have uncertain results. Because nature is not divine but God's creation, human intervention is not infallibly bad. God calls humans to intervene within limits. Life as God intended it is not about operating only in some safe cocoon of our own making - that is too vulnerable to sustain. It is by the risk of faith in God, who alone gives security. Absolute safety is an illusion.

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