

This collection is not without some flaws, including the widely divergent lengths of the analytical essays, the absence of a glossary of technical terms used in all but one of the volumes, the confusing references to each volume of the work as a ‘chapter’, and the non-inclusion of key critiques of Sharia implementation by noted Nigerian Muslim and non-Muslim figures, including Ibrahim el-Zakzaky of the Muslim Brothers and Federal Attorney-General Kanu Agabi. These minor blemishes notwithstanding, there can be little doubt that this collection substantially accomplishes its goal of being a valuable record of an important phase in Nigeria’s history and ‘a resource for scholars’ (vol. 1, p. xiii).

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**Starved for Science: how biotechnology is being kept out of Africa** by

ROBERT PAARLBERG

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According to this book, biotechnology is being kept out of Africa, and environmental activists and selfish consumers, primarily from Europe, are to blame. The evidence presented by Paarlberg could be described as circumstantial, at best. At worst, his argument amounts to little more than dark insinuations that African policy makers and opponents of GM technology have been ‘influenced’ by European anti-GM campaigners and precautionary regulators. In this polemical morality tale, African governments cower in fear of mighty environmental pressure groups and would rather let their own people starve than offend European sensibilities.

As in any such tale, there is an underlying call to action: African leaders and European consumers must mend their ways, of course; right-thinking people must overcome the intransigence of anti-biotechnology activists; but most of all, the United States must do more to drive biotechnology into Africa, for the good of the continent’s poor and hungry people. This is a curiously anti-European tract, apparently intended to provoke righteous indignation in non-European readers and shame in European ones, but most of all to stimulate alarm among American readers at the perceived decline in US influence, relative to European, over African science and development policy. In this book, genetic modification is an effective, safe and, not least, American technology that could save African lives, if only governments and aid donors would promote it more courageously.

The biotechnology corporations get off surprisingly lightly in Paarlberg’s account: such companies have no incentive to serve African markets, therefore we should not expect them to. Meanwhile, their well-meaning attempts to make the technology available in Africa – on terms that protect their proprietary interests – have been thwarted by the insufficient enthusiasm of aid agencies and philanthropic foundations.

Paarlberg’s argument is sophisticated. Africans themselves are making judgments about biotechnology, for good reasons and bad. Those Africans who happen to favour Paarlberg’s own way of seeing the issues do not necessarily have a monopoly on rationality or virtue. Paarlberg also exaggerates the dearth

of biotechnological research and development under way in Africa, and underestimates the major new initiatives, such as the Alliance for a Green Revolution in Africa, which have received high-level support from African leaders and substantial funds from international donors. He condemns the precautionary regulatory models that Europeans are exporting to Africa, while glossing over the alternative model that is being promoted by the United States.

Paarlberg knows all of this: it is in his book. It is the way that the material is marshalled that gives the book its tone of synthetic outrage. Paarlberg is certainly thorough; the book is sprinkled with statistics, cases and references to literature that lend it a superficial gloss of dispassionate authority. But the argument is, ultimately, specious. In particular, Paarlberg constructs a lazy and analytically empty dichotomy between 'science-based' agriculture and the 'anti-science' beliefs of environmentalists. Of course, there is a good deal of mysticism on the fringes of the environmental movement, but what evidence is there that such eccentric views dominate, or that they are responsible for the withdrawal of donor support for African agricultural research? That trend has other explanations, which Paarlberg actually discusses.

In short, this book will not convince anyone who is not already convinced that GM crop technology would now be solving African farmers' problems, if only selfish and misguided Europeans were not standing in the way. In this regard, Paarlberg is fortunate to have a ready audience of prominent and influential patrons. The book has a foreword by Nobel laureates, the plant breeder Norman Borlaug and former US president Jimmy Carter.

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