critical assessments of current developments in sustainable agriculture and alternative strategies for future development. However, the book also contains excellent contributions, including a concise review of no-till agriculture in the United States and a comprehensive overview of recent research on the use of by-products from biofuel production as organic soil amendments.

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Expl Agric. (2013), volume 49 (1), © *Cambridge University Press 2012*
doi:10.1017/S0014479712000713

Arsenic and Rice. By A. A. Meharg and F.-J. Zhao. Dordrecht, Netherlands: Springer (2012), pp. 171, £126.00. ISBN 978-94-007-2946-9.

Rice is the staple food for half of the world's population, and consumption of rice is the major exposure route globally to arsenic. Arsenic has many adverse consequences for human health and affects millions of people worldwide. This book explains the sources of arsenic to paddy soils and the various biogeochemical processes and plant physiological attributes of paddy soil–rice ecosystems that lead to high concentrations of arsenic in rice grain. It includes the global patterns of arsenic concentration and speciation in rice, discusses human exposure to inorganic arsenic from rice and consequences for health. It also highlights particular human populations that have the highest rice consumption, which includes Southern and South-East Asians, and also weaning babies, gluten intolerance sufferers and those consuming rice milk in additional geographic locations. The book also contains information about arsenic concentration and speciation in other major crops and some of the approaches for lowering arsenic in rice grain and in the human diet through agronomic management. The book is an excellent contribution to the field, and is clear and authoritatively written with ample figures and tables and an extensive bibliography. It should be of interest to many biological and environmental scientists concerned with the impact of metals and metalloids in ecosystems and their interactions with soil biota and plants, and consequences for crop production and human health.

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Expl Agric. (2013), volume 49 (1), © *Cambridge University Press 2012*
doi:10.1017/S0014479712000865

Lessons Learned from Long-Term Soil Fertility Management Experiments in Africa. Edited by A. Bationo, B. Waswa, J. Kihara, I. Adolwa, B. Vanlauwe and K. Saidou. Dordrecht, The Netherlands: Springer (2012), pp. 204, €139.95. ISBN 978-94-007-2937-7.

Dr. Bationo's work on soil fertility in Africa is usually worth reading, and this short book is no exception. Ten chapters summarise the major findings from long-term experiments conducted throughout Africa, although in this case 'long-term' means anything over five years because of the paucity of sustained experiments on the continent. There are chapters on effects of crop rotation, tillage, alley cropping and cropping systems (including economic and agronomic evaluation), as well as separate accounts of longer term experiments in the sub-humid highlands of Kenya (Kabete), semi-arid Kenya (Machang'a) and semi-arid Niger. The various authors claim that long-term experiments are an important source of evidence for soil fertility decline, and that they provide critical datasets for the development of sustainable management practices; it is unfortunate then that so few experiments last as long as 10 years because of a lack of funding. So what lessons have been learned? The first chapter, which reviews experiments from West, East and Southern Africa, contains the answers. There are six key points but, in short, the message is that the yield decline was common in all experiments even with inputs, but that the best results (in terms of both absolute yields and sustaining yields) were obtained from treatments that combined both inorganic and organic inputs. With such an apparently clear-cut result, is there a need to spend scarce resources on further long-term experiments, or should the money go instead into promulgating these findings and experience? On this the book is silent.

P. J. Gregory