somaclonal variation (9), somatic hybridization (10), microprotoplasts (11), marker-assisted selection (12) and mutation breeding (16). There have been some achievements and many plants are under test, although a lot of the examples given are from other crops.

The book is well edited and presented, and should be useful to citrus scientists and growers, and breeders of other crops.

Brian Wood and Hereward Corley

Potato Biology and Biotechnology. Advances and Perspectives. Edited by D. Vreugdenhil with J. Bradshaw, C. Gebhardt, F. Govers, D. K. L. MacKerron, M. A. Taylor and H. A. Ross. Oxford; Amsterdam: Elsevier (2007), pp. 823, £62.99. ISBN-13: 978-0-444-51018-1. doi:10.1017/S0014479708006832

Want to know more about resistance genes, or mathematical modelling or flavour or emblings (as opposed to seedlings) or biopharming or salt resistance? Here is a large book of 36 chapters, written by 57 experts and knocked into shape by seven editors. So what do you get? The answer is an excellent, authoritative and up-to-date account of the present state of knowledge of one of our most important crop plants, namely potato.

The book is arranged in eight sections and includes basic topics of biology like plant morphology and development, dormancy, response to water, radiation, temperature, CO_2, pests and diseases. More applied topics feature the marketing of ware and seed, tuber quality, mineral nutrition and decision-support systems. The section on genomics, genetics and breeding is complemented by one on genetic engineering and testing of GM clones in the field.

With this breadth, the book should be of interest to propagators, growers and marketers as well as to those involved in the research reviewed. As a late-blight pathologist I found the chapters on genetics, breeding and GM particularly rewarding. However, I would have preferred a more logical arrangement of chapters, and some of the figures need more editing.

This is a timely publication and contributes to the celebration of the potato in this International Year of the Potato. It should become a valued reference for a few years at least.

David Shaw

Non-Chemical Weed Management. Principles, Concepts and Technology. Edited by M. K. Upadhyaya and R. E. Blackshaw. Wallingford, UK: CAB International (2007), pp. 239, £75.00. (Hardback). ISBN-13: 978-1-84593-290-9. doi:10.1017/S0014479708006844

Growing concerns about potential negative impacts of agrochemicals on the environment and human health have generated an increasing need for alternative, non-chemical crop production methods. This book provides a review of the research advancements on non-chemical weed management from agronomic, economic and environmental perspectives.

Subject chapters target prevention, weed–crop interactions, cultural, mechanical and thermal weed management, cover crops, allelopathy, biocontrol, bioherbicides, non-living mulches, and solarization. In the closing synopsis the editors conclude that a sound weed management strategy should not simply target elimination of weeds but rather be aimed at keeping them at acceptable infestation levels. This should be done through prevention, enhancement of crop competitive ability and the use of multiple control practices to prevent the adaptation of weed species to single control technologies.

Despite the aforementioned conclusion, the book marginally discusses weed competitive and suppressive crop varieties and ways to exploit genetic variation in these traits to the benefit of weed management. There was equally little information about subsistence cropping systems in the tropics where non-chemical weed management is often a necessity rather than a choice.

However, the book excels by illustrating just how difficult it is to optimize economic and environmental benefits while effectively targeting weeds. This book is an asset to the existing weed science literature as it presents an accurate and up-to-date overview of non-chemical solutions, discussed in a balanced and well-thought-out manner, making it an enjoyable and useful read.

Jonne Rodenburg