

house or in one with five or six. English society was clearly more complex and fluid than might at first appear. Similarly, 'the exempt' were not a homogeneous group but comprised several layers of relative poverty, with those receiving relief from the parish at the bottom. Hearths were found in houses, of course, and Nat Alcock's section on the housing of late seventeenth-century Warwickshire ranges from the largest aristocrat's mansion to the smallest cottage. He has used a combination of documentary evidence and surviving standing buildings, most of them timber-framed, to paint a picture of what the hearths and their chimneys were like, how the rooms were used, and the number of rooms that might be expected in a one-hearth or two-hearth house. The detailed pictorial map and manorial survey of Chilvers Coton, done in 1684, provide much detail, particularly for the smallest houses, none of which have survived to the present day.

This volume has excellent illustrations showing houses large and small, and the coloured maps reveal the statistics in an easily assimilated visual form. Family historians have always known that the hearth tax was a useful source, as have social and economic historians, but for the latter it has always been a difficult mass of data to handle. The hearth tax project is making all this data available, county by county: when complete it will provide invaluable insights into society, economy, population, wealth and poverty, and developments in vernacular architecture, across the country. The Warwickshire volume is an excellent addition to this body of research.

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Tom Brooking and Eric Pawson, with Paul Star, Vaughan Wood, Peter Holland, Jim McAloon, Robert Peden and Jim Williams, *Seeds of Empire: The Environmental Transformation of New Zealand*, London and New York, I.B. Tauris, 2001. xx + 276 pp. £49.50. 9781845117979.

This book is an outstanding addition to New Zealand's rural historiography. It explores the process by which so much of those islands came to be covered by exotic pasture by 1939 and much of the rest devoted to grazing sheep and cattle. Most chapters look at what might be described as 'inputs' to that process: skills, seeds, fertiliser, capital, knowledge of markets and scientific research. All make significant contributions, but I felt that there was particular value in the essays that looked at the skills European settlers brought and modified to suit a very different environment from that to which they were accustomed (Holland, Star and Wood; Peden); at how producers accessed capital and knowledge of new methods and market preferences (McAloon; Wood and Pawson); and at the development of the trade in pasture seeds (Pawson and Wood). In each case careful and thoughtful primary research demonstrates that those who developed New Zealand farming were far from being a bunch of ignorant, hide-bound individuals. They were in general anxious to acquire new knowledge about production methods and markets, and were prepared to adapt. While the animal breeds and pasture seeds New Zealand farmers

used came initially from overseas, principally from Europe, they rapidly developed or selected types to suit local conditions. Those new types, like the Corriedale sheep and Akaroa cocksfoot, were sometimes then used extensively in other parts of the 'new world' and even in Europe itself.

The last two chapters in the main body of the book (Star and Brooking; Brooking and Star) argue that the development of state-funded scientific research and a powerful Department of Agriculture from the early twentieth century disrupted the pattern of 'farmer-centric' development. In the interwar period of 'the grasslands revolution' the 'experts' apparently succeeded in replacing careful farmer observation and experiment with a drive to maximise production through the restriction of pasture to perennial ryegrass and clover, encouraged through the massive use of phosphatic fertiliser and heavy stocking. I suspect that this picture of something close to agricultural totalitarianism may be somewhat overdrawn, at least for the interwar period. Relevant to this are some problems with Table 10.1 on p.187, 'The origins of phosphatic fertiliser' used in New Zealand at various years between 1920 and 1958. Unfortunately the figures relate only to imports of rock phosphate rather than phosphatic fertilisers overall. This has the effect of greatly exaggerating the growth in the use of such fertilisers over the period, especially in the interwar years. It also distorts the percentages of the totals coming from 'Australia and rest of world', most seriously for the interwar period, which is the focus of the chapter. The intention of the table is to back up a rather careless claim by Damon Salesa that 'Nauru produced almost all of the phosphate that proved key to the domestic New Zealand agricultural revolution – the "grasslands revolution" of the 1920s and 1930s',<sup>1</sup> while recognising the contribution of Ocean Island and the Tuamotu Islands. In fact, thanks largely to continued use of basic slag on New Zealand farms, Belgium supplied thirty-four per cent of New Zealand's import tonnage of phosphatic fertiliser in 1929 and Nauru only twenty-three per cent. New Zealand's almost total reliance on Pacific phosphate was essentially a post-World War Two phenomenon.

However, I would stress again that *Seeds of Empire* is an outstanding contribution to New Zealand's burgeoning rural historiography, with insights that should interest global historians everywhere. It is to be hoped that the somewhat eye-watering price will not limit distribution of this landmark collection of essays.

1. Quoted on p.186, from D. Salesa, 'New Zealand's Pacific', in G. Byrnes (ed.), *The New Oxford History of New Zealand* (Melbourne, 2009), pp.162–63.

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J. Burchardt and P. Conford, eds, *The Contested Countryside: Rural Politics and Land Controversy in Modern Britain*, London, I B Tauris, 2008, viii + 212 pp. 9781845117153.