

## **Reinventing the Wheel: Milk, Microbes and the Fight for Real Cheese**

Written by B. and F. Percival  
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Part manifesto, part history and part reference book, this summary of modern cheesemaking will appeal equally to microbiologists, cheese aficionados, farmers and cheesemakers. With good humour, the two charming and well-informed authors (Bronwen Percival is the cheese buyer for Neal's Yard Dairy; her husband Francis is a food and wine writer) provoke debate about cheese, but also about the state of everything related to food, land use and modern consumption.

Chapters review the factors that govern production and quality of cheese, largely in northern Europe and the US. The Ecologies chapter sets the scene with today's reassessment of the benefits, hazards and decline of microbial diversity in milk, and introduces the scientists whose work has challenged the predominant "destroy and replace" strategy for managing microbes in the dairy industry.

Setting out the current tensions in the market, and pondering the success of 'real' ale and bread, the authors state their ambition for "real cheeses made in the context of specific places". The biochemistry of cheese production leads into the source of the milk: the specifics of dairy cattle genetics is a reevaluation of the utility of the ubiquitous black and white cows.

A recurrent theme is the problem of treating milk as a bulk commodity: market forces may now finally favour smaller scale producers. The Microbes, Risks and Cultures chapters are the heart of the book for microbiologists. The predominant species feature alongside those endowing particular flavours, and there is a thorough assessment of pasteurisation and dairy hygiene, and even difficulties with bacteriophages.

The authors firmly set out their stand for unique cheeses produced with characterful milk with as few inputs as possible – but must still ask, is it possible, after so much loss of expertise, to reinvent the wheel? To manage this scope and detail without clunkiness and errors is a tour de force.

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