

Edited by
John S. Lucas & Paul C. Southgate

Aquaculture

FARMING AQUATIC ANIMALS AND PLANTS

SECOND EDITION



 WILEY-BLACKWELL

Aquaculture

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Farming Aquatic Animals and Plants

Second edition

Edited by

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Preface to the Second Edition

The rapid growth of aquaculture continues at a faster rate than predicted a decade ago. Total global production by 2007 had increased by two-thirds over the production reported in the first edition of this book. This has been possible because of new technical developments, rapid expansion of some new and existing industries, and diversification in the species utilised by aquaculture. These exciting developments provide the basis for this second edition, which includes a major revision of production statistics and chapter contents, seven new chapters and a more diverse international authorship and coverage. There are contributors from 12 countries, and aquaculture in many more countries is considered. With the increasing importance of China as the major source of aquaculture products, there is greater consideration of aquaculture in that country. There are three new Chinese authors con-

tributing to this edition. Sadly, Professor C. K. Tseng, who contributed Macroalgae in the first edition, is now deceased. He is considered to be the 'father of Chinese mariculture' for his great achievements in marine science and outstanding leadership in that country over many years.

We express our sincere gratitude to the authors for their commitment in contributing chapters and, in some cases, for their understanding and patience. We also express our gratitude to our wives, Helen and Dawn, for their contributions and support. We trust that you will find this new edition both helpful and stimulating.

*John S. Lucas
Paul C. Southgate
June 2011*

Preface to the First Edition

This textbook seeks to convey to its readers the contributors' enthusiasm for aquaculture and their accumulated knowledge. The contributors are recognised internationally in their fields. While it is not possible to comprehensively cover the ranges of aquaculture theory, practices and cultured organisms in one textbook, it is our earnest hope that this text will give readers a broad understanding of these topics.

The first part of the text introduces aquaculture with a series of 'theory and practice' topics, ranging from traditional topics such as ponds and pumps to contemporary environmental issues, nutrition physiology and genetic engineering. The second part of the text consists of chapters dealing with specific organisms, or groups of organisms, which illustrate the variety of culture methods used in aquaculture. It also provides examples of biological and other factors that make these organisms suitable for culture. The aquatic animals and plants treated in the text are but a small proportion of the hundreds of commer-

cially cultured species; however, they constitute the most significant commercial components of world aquaculture production. They include the four major groups of cultured organisms – fish, crustaceans, bivalve molluscs and seaweeds; the three broad categories of aquatic environments – fresh, brackish and seawater; and the broad latitudinal zones – temperate, subtropical and tropical regions.

We express our sincere gratitude to the authors for their commitment in contributing chapters and, in some cases, for their understanding. Mr Michael New, President, European Aquaculture Society, Past-President, World Aquaculture Society, kindly assisted by reviewing Chapters 1 and 23. We also wish to express our gratitude to our wives, Helen and Dawn, for their substantial contributions.

*John Lucas
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April 2003*

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