Sex Control in Aquaculture
Hanping Wang (Editor), Francesc Piferrer (Editor), Songlin Chen (Editor), Zhi-Gang Shen (Associate Editor)


DESCRIPTION

A comprehensive resource that covers all the aspects of sex control in aquaculture written by internationally-acclaimed scientists

Comprehensive in scope, *Sex Control in Aquaculture* first explains the concepts and rationale for sex control in aquaculture, which serves different purposes. The most important are: to produce monosex stocks to rear only the fastest-growing sex in some species, to prevent precocious or uncontrolled reproduction in other species and to aid in broodstock management. The application of sex ratio manipulation for population control and invasive species management is also included. Next, this book provides detailed and updated information on the underlying genetic, epigenetic, endocrine and environmental mechanisms responsible for the establishment of the sexes, and explains chromosome set manipulation techniques, hybridization and the latest gene knockout approaches. Furthermore, the book offers detailed protocols and key summarizing information on how sex control is practiced worldwide in 35 major aquaculture species or groups, including fish and crustaceans, and puts the focus on its application in the aquaculture industry.

With contributions from an international panel of leading scientists, *Sex Control in Aquaculture* will appeal to a large audience: aquaculture/fisheries professionals and students, scientists or biologists working with basic aspects of fish/shrimp biology, growth and reproductive endocrinology, genetics, molecular biology, evolutionary biology, and R&D managers and administrators. This text explores sex control technologies and monosex production of commercially-farmed fish and crustacean species that are highly in demand for aquaculture, to improve feed utilization efficiency, reduce energy consumption for reproduction and eliminate a series of problems caused by mixed sex rearing. Thus, this book:

- Contains contributions from an international panel of leading scientists and professionals in the field
• Provides comprehensive coverage of both established and new technologies to control sex ratios that are becoming more necessary to increase productivity in aquaculture

• Includes detailed coverage of the most effective sex control techniques used in the world's most important commercially-farmed species

_Sex Control in Aquaculture_ is the comprehensive resource for understanding the biological rationale, scientific principles and real-world practices in this exciting and expanding field.

---

**ABOUT THE AUTHOR**

**About the Editors**

**HAN-PING WANG** is Principal Scientist and Director of the Aquaculture Research Center, and Aquaculture Genetics and Breeding Laboratory, at The Ohio State University, Piketon, Ohio, USA

**FRANCESC PIFERRER** is Research Professor and head of the Group of Biology of Reproduction at the Institute of Marine Sciences, Spanish National Research Council, Barcelona, Spain

**SONG-LIN CHEN** is Professor and Director of the Lab for Aquaculture Biotechnology and Genomics at Yellow Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences, Qingdao, China

**Associate Editor**

**ZHI-GANG SHEN** is Associate Professor at the College of Fisheries, Huazhong Agricultural University, Wuhan, China, and Aquaculture Genetics and Breeding Laboratory, The Ohio State University South Centers, Piketon, USA

---

For additional product details, please visit [https://www.wiley.com/en-us](https://www.wiley.com/en-us)