Shellfish safety and quality
Edited by S Shumway, University of Connecticut and G Rodrick, University of Florida, USA

DESCRIPTION

Shellfish are a very popular and nutritious food source worldwide and their consumption has risen dramatically. Because of their unique nature as compared to beef and poultry, shellfish have their own distinct aspects of harvest, processing and handling. Edited by leading authorities in the field, this collection of review papers discusses issues of current interest and outlines steps that can be taken by the shellfish industry to improve shellfish safety and eating quality.

Opening chapters provide an overview of the key issues associated with microbial and biotoxin contamination. Parts two and three then address in more detail methods to improve molluscan shellfish and crustacean quality and safety. Chapters focus on detection of algal toxins, monitoring and mitigation of the effects of harmful algal blooms, metals and organic contaminants, biofouling, disease control and selective breeding. Part IV reviews legislation, regulation, public confidence in shellfish and risk management. Chapters on post-harvest issues, such as depuration, storage and packaging complete the volume.

With its distinguished editors and international team of experts, Shellfish safety and quality will be an essential reference for those in the shellfish industry, managers, policymakers and academics in the field.

ABOUT THE EDITOR

Dr Sandra Shumway is a Research Professor at the University of Connecticut, USA. She is Editor of the Journal of Shellfish Research and the Journal of Experimental Marine Biology and Ecology, Founder and co-Editor of Harmful Algae, Past-president of the National Shellfisheries Association, and a Fellow of the American Association for the Advancement of Science.

Dr Gary Rodrick is Professor of Food Science and Human Nutrition at the University of Florida, USA. Well-known for his research on food safety, he is co-Editor of the Food Safety Handbook and serves on the International Advisory Committee for Science-Diliman.
Monitoring viral contamination of molluscan shellfish
M Pompey, J C Le Saux, D Hervio-Heath and S F Le Guayder, IFREMER, France

Algal toxins and their detection
G Boyer, State University of New York, USA

Mitigation of effects of harmful algal blooms
M Sengco, Smithsonian Environmental Research Center, USA

Managing molluscan shellfish-borne microbial diseases
T Soniat, University of New Orleans, USA (formerly Nicholls State University, USA)

Disease and molluscs quality
S Corbeil, Commonwealth Scientific and Research Organisation (CSIRO), Australia and F Berthe, Animal Health and Welfare Unit, Italy

Hazard analysis and critical control point (HACCP) Programs for raw oyster processing and handling
V Garrido and S Otwell, University of Florida, USA

Biofouling and the shellfish industry
D Watson University College Cork, Ireland and S Shumway and R B Whittatch, University of Connecticut, USA

Part 3 Improving crustacean safety and quality
Optimization of crustacean quality through husbandry and adherence to post-harvest standards for processing
L D’Abramo, J L Silva and T Kim, Mississippi State University, USA

Development of vaccines and management of viral diseases of crustaceans
M van Hulten, Intervet International BV, The Netherlands and A Barnes and K Johnson, Queensland University, Australia

Specific pathogen-free (SPF) shrimp stocks in shrimp farming facilities as a novel method for disease control in crustaceans
D V Lightner and R M Redman, University of Arizona and A Arce and S Moss, Oceanic Institute, USA
Introduction. The concept of domesticated specific pathogen free (SPF) shrimp: a historical perspective. Events leading to development of Litopenaeus vannamei as the dominant species in the Americas. Adaptation of the specific-pathogen-free (SPF) concept to domesticated shrimp stocks. International principles for responsible shrimp farming. Biosecurity and the culture of wild seed/broodstock. Biosecurity through environmental control and best management practices.

Selective breeding of penaeid shrimp
S Moss and D R Moss, Oceanic Institute, USA

Part 4 regulation and management of shellfish safety
Legislation, regulation and public confidence in shellfish
C Askew, Shellfish Association of Great Britain, UK

Risk management of shell fisheries
R Lee, Cefas Weymouth Laboratory and L Murray, Food Standards Agency, UK

Part 5 post-harvest issues
Molluscan shellfish depuration
G Rodrick, K Schneider, J Cevallos, University of Florida, USA

Slaughter, storage, transport and packaging of crustaceans
G Flick, L Granata and L Marsh, Virginia Tech, USA

Packaging, storage and transport of molluscan shellfish
G Rodrick, University of Florida and V Garrido, Institute of Food and Agricultural Sciences, USA