

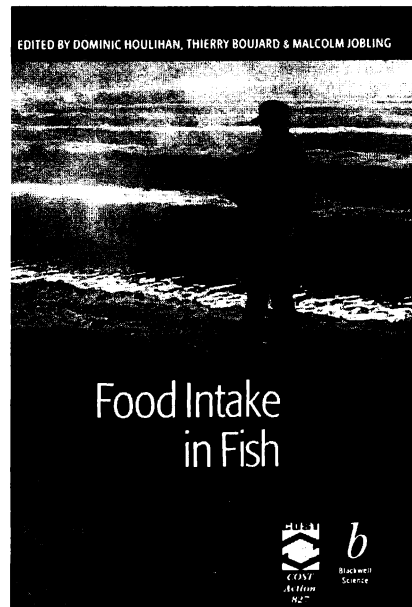
Food Intake in Fish

D. Houlihan, T. Boujard, and M. Jobling (Editors).
Blackwell Science Ltd., Osney Mead, Oxford, UK. (2001)
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As the field of fish nutrition continues to grow and flourish, current reference texts updated with the latest and most relevant references are becoming more important and necessary. **Food Intake in Fish**, edited by Dominic Houlihan, Thierry Boujard and Malcolm Jobling is an excellent addition to the library of anyone involved in the culture of, or experimentation with fish. The editors have done a nice job of incorporating not only the basics involved in feeding and caring for fish, but also have addressed current hot-topic issues as well. The contributors have a decidedly European slant, which is both refreshing and illustrative, as the subtle differences in attitude and vision of worldwide aquaculture come through in the extensive narrative. The book is divided into 15 chapters,



starting with basic feed components and feed manufacture and continuing through hormonal control and the physiological consequences of feeding in fish. The final chapter discusses the important implications of nutrient partitioning and feed composition, and their effects on body composition. The chapters are well designed with an introductory paragraph describing the information to follow, along with a concluding paragraph summarizing the details of each chapter. Most all of the chapters are well written and fully annotated with current references and citations. Methodology is discussed where appropriate, but not to a point where it interferes with the flow of the narrative or the subject at hand. For the most part, tables and figures are clear and concise, emphasizing key points in the specific chapters. A helpful glossary is included in the back of the book.

A chapter discussing statistical design was especially helpful. Many times, this extremely important subject is overlooked, resulting in poorly designed experiments and improper analysis of data. This chapter is well thought out and well presented, using a hypothetical problem as an example that is referred to throughout the remainder of the chapter. This approach is helpful to the reader as various statistical and mathematical expressions are presented in the remainder of the chapter. Although certainly not an exhaustive discussion of statistical design and practices, this chapter gives an excellent overview on experimental design, with good references for those who wish (or need) to reacquaint themselves with the basics of soundly designed, statistically relevant feeding experiments.

Another interesting and informative chapter deals with the physiological effects of feeding. This excellent chapter discusses the important roles of protein turnover, and the role of amino acid pools in food intake and amino acid flux. Both tissue metabolic pathways and effects on whole-body metabolic physiology are discussed in depth, once again, complete with ample and relevant literature citations.

The chapters dealing with hormonal control of feeding and nutritional factors and feed characteristics affecting feed intake were excellent contributions, as these subjects are often lacking in fish nutrition texts. Specific hormones involved in stimulation, as well as inhibition, of feed intake are discussed in detail. Nutritional factors

utilized by fish in the selection and rejection of feeds are investigated and discussed in terms of the role these factors play in feed selection.

There were some unfortunate omissions in this text, which if incorporated, would have made the book even more valuable as a complete reference. There is no mention of larval nutrition. Inclusion of this important field in the volume would have strengthened the text considerably. Another omission is any discussion of digestive physiology. This subject could have easily been incorporated into the chapter dealing with gustation and feeding behavior and would have been a strong complement to the subject matter contained in that particular chapter. Nevertheless, **Food Intake in Fish** makes an excellent reference book for researchers, students and aquaculturists. The price is a bit high, which probably precludes it from being utilized as the main text for graduate nutrition courses, but it still would make a solid addition to a complete reference library.