

NOTICE OF PUBLICATION

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Sustainable Aquaculture for a Secure Future

Title: Preface

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Abstract: Tilapia, because of their enormous adaptability and ability to reproduce under a wide range of physical and environmental conditions, excellent growth rates on a wide variety of natural and prepared diets, resistance to handling and disease-causing agents, and broad consumer appeal as a food fish, are the most successfully cultured fish species worldwide. Although they are endemic to tropical freshwater in Africa, Jordan, and Israel, their distribution has widened following introductions elsewhere in the early part and after the middle of the twentieth century. They are now cultured in virtually all types of production systems; in both fresh and saltwater; and in tropical, subtropical, and temperate climates. Tilapia dominate both small and large-scale aquaculture in many tropical and subtropical countries, both as a low-priced product for mass consumption as a staple protein source and as a high-value, upscale product for export markets. They are increasingly being seen as the species of choice for intensive aquaculture and are likely to become the most important of all cultured fish in the twenty-first century.

In the past two decades, as a result of technological improvements, tilapia farming has expanded rapidly worldwide at a rate of approximately 12 to 15 percent annually and is predicted to continue to grow steadily for the foreseeable future. During this period, a number of books and conference proceedings dealing with various aspects of tilapia biology, aquaculture, and exploitation have been published. The information contained in these publications has contributed greatly to the successful development and expansion of the tilapia aquaculture industry.

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In the past few years, however, considerable technological advances have been made, and this book puts together the currently available information on tilapia aquaculture into a single, comprehensive volume.

The book begins with an exhaustive review of tilapia biology. This is followed by chapters on the prospects and potential for global production, physiological aspects of growth, recent directions in genetics, seed production, and hormonal manipulation of sex. The current state of commercial tilapia culture is discussed in three chapters on different production systems: pond production, culture in flowing water, and cage culture. The chapter on farming in saline water presents the most comprehensive review of knowledge about all stages of tilapia production, production systems, and socioeconomic impacts. The management of soil and water in ponds and the improvement of effluent quality to minimize impact on the environment are discussed in the following chapter. Four chapters review current knowledge on nutrient requirements, nonnutrient dietary components, feed formulation and processing, and feeding practices. Common parasites and diseases, as well as their prevention and control, and vaccinology against streptococcal disease, are then extensively discussed. The penultimate chapter elaborates the techniques used for harvest, handling, and processing. The book concludes with a comprehensive chapter on marketing and economics.

This abstract was excerpted from the original paper which was in, C. Lim and C.D. Webster (Editors). *Tilapia: Biology, Culture, and Nutrition*. Food Products Press, Binghamton, 705 PP.