

EXPLORING STRATEGIES FOR DEVELOPING AND EXPANDING INTEGRATED RICE-FISH FARMING TO ENHANCE FOOD SECURITY IN SRI LANKA

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Abstract

Integrated Rice-fish farming (IRFF) represents a symbiotic farming system where fish are cultivated in rice fields. This review aimed to assess the relevance and role of IRFF as a strategic approach to ensure food security in Sri Lanka. In this attempt available information on Integrated Rice Fish farming have been compiled with the support of scientific data bases of Google Scholar, PubMed, Scopus, and Science Direct. According to the literature, the IRFF significantly increased both rice and fish yields compared to their monocultures, and the productions vary with the geographic regions. For instance, IRFF in Indonesia exhibited an increase of their rice production by 22-32% than that of monocultures and similar trends were also observed in West Bengal, India, and Thailand. Considering the Sri Lankan context, as Sri Lankan adults and children especially under five years are prevalent several forms of malnutrition including underweight, stunting and wasting, micronutrient inadequacies. Thus, the development and expansion of rice-fish farming among the rural farming communities is vital as a system that increase both protein, carbohydrate and other micronutrient requirement demand exist specially among rural communities. However, well-planned strategies to develop and expand this system among in Sri Lankan rural paddy farmers are required. The robust political commitment and support from governmental and non-governmental entities are vital for facilitating accessible credits for initial infrastructure, implementing training and awareness programs tailored for small-scale farmers, establishing effective market linkages, conducting adaptive research initiatives, and ensuring the provision of essential inputs such as quality fingerlings. The success of these strategies depends on the active involvement of financial institutions and donor organizations, aimed at empowering farmers and ensuring equitable compensation. In conclusion, this review unveils the significance of IRFF in enhancing food security and outline pathways for its development and expansion in Sri Lanka. Further, rice-fish integration is one of the best options to mitigate the malnutrition issues in rural communities, and particularly important to meet the Sustainable Development Goals (No Poverty (SDG 1), Zero Hunger (SDG 2), Good Health and Well-being (SDG 3)).

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