

Warm Water Fish Production as a Niche Production and Market Diversification Strategy for Farmers

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Project Outline

- Developing a novel aquaculture approach: sustainable & environmentally friendly production method for farmed tilapia in rural areas
- Investigating consumers perceptions of sustainable farmed fish & an assessment of the impact on environmental & public health factors
- This inter-disciplinary project investigates market opportunities & social impacts in addition to technical aspects. The research is further strengthened by collaboration with commercial partners throughout the three year project cycle

Technical Trials: Thailand

- Exploratory trials: comparison of novel activated suspension 'AST' approach with conventional recirculation system 'RAS'
- Water quality & tilapia performance measured with various stocking densities and feeds in the AST system
- Costs of production



Oreochromis niloticus 'Tilapia'

The Tilapia

- Traditionally a low-value fish farmed for subsistence. Firm, white flesh and a mild taste – substitute for white fish
 - Highly suitable for low cost aquaculture
 - Omnivorous: can be fed a herbivorous diet (no need for processed fish or meat meals)
 - Hardy, adaptable and fast growing in warm water
- Potentially a sustainable source of quality food with fewer environmental impacts.
- Forecast as a partial solution to over-fishing



Tilapia for sale in Harrods, London

Health & Sustainability Impacts

- Exploring the direct and indirect impacts of tilapia culture using an AST system in the UK through inter-linking marketing activities & technical trials
- Sustainability & health implications throughout the whole process: farm to fork
- Public Health, Occupational 'fish farmer' Health, Tilapia Nutritional Qualities, Impact of Feeds, Sustainability of AST System, Health Benefit Inequalities



Anton & Francis: Edinburgh Mela, Fish as Food Questionnaire

Consumer Perceptions

- Fish as Food Questionnaire: Edinburgh Mela Health & environmental concerns regarding fish as food Awareness & perceptions of tilapia
- Focus Groups Attitudes towards health issues with food, sustainable food production, organic food & aquatic products Awareness of & preferences towards tilapia



Conventional energy-intensive 'RAS' system



Farming tilapia in a sustainable 'AST' system

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