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The College of Graduate Studies and the College of science Cordially Invite You to a

Master Thesis Defense

Entitled

AQAPONIC EFFECT OF STOCKING DENSITY OF TILAPIA OREOCHROMIS NILOTICUS AND CHERRY TOMATO SOLANUM LYCOPERSICUM PRODUCTION SUSTAINABILITY IN UAE CONDITION.

by

Adel Ibrahim Hussain Abdullah

Faculty Advisor

Dr. Khaled Abbas El Tarabily, Department of Biology

College of Science

Date & Venue

10:30 AM

Monday, 19 November 2018

Room 1013, E1 Building

Abstract

The present study was conducted to cultivate the tomato plants in a UVI – model aquaponics system in UAE climatic condition. The tomato plants were cultivated with Tilapia (Oreochromis niloticus) fish effluent water. The tomatoes were cultivated with three different densities of fishes like, 100 fish/m3, 120 fish/ m3 and 140 fish/ m3. Each green house is 120 m3 plant cultivation area and 15.5 m3 of fish culture area and the total water troughs volume is 58m3. Tomato plants are planted with the ratio of 3 plants/m2. The introduced fishes are fed with 35% protein based commercial floating feed at the ratio of 5% of the total weight of fish. The fishes were fed three time/ day at 4 hours interval. The total duration of the experiment period is 8 months; first three months for plant growth and flowering; the tomato fruits harvest started from fourth month onwards. Each and every month fish and plant growth parameter, water quality parameters are examined proper analytical method. Also, the experiment water, tomato fruits and cultivated fishes body proximate composition and mineral nutrient contents were analysed. Finally, the results show all significantly higher performance in high density of fish treatment yield. The present research revealed that the high density of fishes with tomato cultivation is suitable for this aquaponics system in UAE climatic condition.

Keywords: *Oreochromis niloticus*, aquaponic system, feeding frequency, stocking density.