Aprovechamiento de metabolitos nitrogenados del cultivo de tilapia en un sistema acuapónico [

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text (article)

Analítica

During tilapia production cycle (six months), mushrooms, green fodder and cucurbits were conducted in an aquaponic system to evaluate their efficiency in the removal and use of nitrogenous waste. For the study, a recirculation system of three circular tanks of 7mp3(B was used, where 64 tilapias per mp3(B (0.35 " 0.18 g) were stocked. During the first phase, three mushroom cultivation cycles of 20 d were developed in two systems: Aquaponic and traditional irrigation. Subsequently, six 12 d of growth cycles for green fodders (yellow and white maize, wheat and sorghum), and finally one 45 d cucumber and watermelon bicultivation cycles were done. The total cumulative mushroom production in the aquaponic treatment during the three cycles was 16 % higher than the obtained in the traditional treatment. Most of forage production in total fresh biomass was obtained with wheat (47.55 kg), however The higher length in the stems (27 " 2.20 cm) and the greater nitrogen metabolite removal efficiency were achieved with white maize. The cucumber and watermelon plants produced fruits until the second month of culture with total yield of 27.15 kg and 4.84 kg, respectively, and also they are the most efficient to leverage metabolites versus mushrooms and fodder. With the above results, it can be concluded, that during the tilapia production, it is possible to grow various vegetables, and take advantage of nitrogenous metabolites by aquaponic practices
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