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## FULL PAPERS PROCEEDING MTAR 2014, BANGKOK THAILAND

PATOLA CRAFT OF SURENDRANAGAR, GUJARAT: SUSTENANCE THROUGH GREEN TECHNOLOGY.....1-7  
Muktai Sathe and Reena Bhatia

ANALYSTS OF ECONOMIC VALUE OF CREATIVE TOURISM IN NAKHON SI THAMMARAT PROVINCE, THAILAND.....8-19  
Jeeranon Thongamak and Rungrawee Jitpakdee

ANALYSTS OF ENERGY DETECTION OVER CASCADED NAKACAMT M FADING CHANNELS.....20-26  
Haci Ilhan

SOFTWARE PROGRAM DEVELOPMENT OF CERTIFICATE OF ORIGIN REQUISITION SYSTEM(COR) APPLYING FOR CERTIFICATE OF ORIGIN TO DEPARTMENT OF FOREIGN TRADE (THAILAND) BY USING QFD: A CASE STUDY COMPANY.....27-40  
Tharataep Premprasatsit and Jakkrapong Limpanussorn

EFFECT OF COMPUTER-BASED ACCOUNTING INFORMATION SYSTEM (CBAS) ON THE QUALITY OF ACCOUNTING INFORMATION AND MANAGERIAL PERFORMANCE OF SUGAR INDUSTRIES.....41-55  
Asep Darmansyaha, Acip Sutardia and Hamidahb

EVALUATING THE PERCEIVED USABILITY OF VIRTUAL LEARNING ENVIRONMENT IN TEACHING ICT COURSES.....56-69  
Irma T. Plata and Darico B. Alado

ENTREPRENEURIAL ENGAGEMENT OF ENTREPRENEURSHIP GRADUATES BATCHES 2008 -2012 OF ST. PAUL UNIVERSITY MANILA.....70-83  
Arsenio T. Bignoria

PREVALENCE OF HEPATITIS C VIRUS ANTIBODIES AMONG BLOOD DONORS IN OMDURMAN REGION IN SUDAN.....97-107  
Mahasin AL Noor, Altayeb Elazomi, Ahmed Babiker and Azhari Mekki Babiker

RELATIONSHIP OF BOLTON'S RATIOS AND TOOTH-SIZE DISCREPANCY.....108-117  
Tarek Dokhan, Najeeb Shebani and Abdurraouf Zaet

VEGETATIONAL COMPOSITION AND DIVERSITY ALONG EROSION PRONE AREAS OF CANILI PANTANBANGAN ROAD NETWORK IN AURORA PROVINCE, PHILIPPINES.....109-115



**MTAR-14**

**Catfish (*Clarias gariepinus*) Fry Growth at Reduced Feeding Level in the Biofloc Culture System in Bandung Regency, Indonesia**

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**Abstract**

The aim of the research was to observe catfish (*Clarias gariepinus*) growth at reduced feeding level in the biofloc culture system. Feed residues and metabolites from catfish farms contain toxic ammonia that can affect water quality and organism growth. However, the existing organisms involved in the biofloc system can change ammonia into a non-toxic nitrite. Biofloc can also be used as catfish feed. The research was carried out at the hatchery Fish Breeding Centers Ciparay Bandung Regency from April 2014 until June 2014. The research employed the Completely Randomized Design (CRD) design of experiment, which involved six different feeding level reduction treatments, each of which having a different amount of feed but the same amount of biofloc. The research administered the following treatments: (A) 0% feeding level reduction (positive control), (B) 5% feeding level reduction, (C) 10% feeding level reduction, (D) 15% feeding level reduction, (E) 20% feeding level reduction, (F) 25% feeding level reduction. Each treatment was repeated three times. The parameter observed was Average Daily Gain (gram/day). Treatments A through F yielded the following results respectively: 0.32; 0.30; 0.29; 0.26; 0.29 and 0.30. Statistically, the results indicated no significant difference. In other words, reduction of feeding level for catfish fry had no effect on Average Daily Gain, and a 25% reduction even yielded the highest result. The water quality parameters observed, namely temperature, pH level, and dissolved oxygen (DO), indicated optimum figures for catfish fry rearing.

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*Keywords*— catfish rearing, biofloc, reduced feed, Average Daily Gain.

**Introduction**

Waste from fish farms is dominated by biodegradable organic matter such as proteins, carbohydrates, and fats from unconsumed feed and its faeces. Such waste materials are organic matter which may be used by heterotrophic bacteria as a potential source of nutrition for biofloc supporting organisms, both as fish feed and water quality control. Biofloc is a combination of macro- and microorganisms including bacteria, microalgae, fungi, protozoa, metazoan, and nematodes (Tacon et al., 2002 in Kurniasari, 2010). Floc biomass formed in bodies of water may be consumed by fish as additional sources of feed and as water purifier (Aiyushirota, 2009).

In the biofloc technology, heterotroph bacteria are the organisms quickly converting  $\text{NH}_3$  into bacteria biomass.  $\text{NH}_3$  is a toxin, yet on the other hand provides the energy

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