ABSTRAK

Suri Pelu, NPM. 05171611023. **Pengaruh Penambahan C-Organik yang Berbeda terhadap Penurunan Amoniak (NH_3) Nitrit (NO_2) dan Nitrat (NO_3) pada Budidaya Udang Vaname (*Litopenaeus vannamei*) dengan Sistem Bioflok.** Yang dibimbing oleh bapak Dr. Gamal M. Samadan S.Pi, M.Si selaku pembimbing I, dan Ibu Dr. Yuliana S.Pi, M.Si selaku pembimbing II.

Penggunaan sumber C-organik dalam media bioflok sebagai sumber karbohidrat alami yang bertujuan untuk mendorong pertumbuhan bakteri heterotrof serta pemanfaatan nitrogen yang berasal dari protein pakan serta amoniak yang dihasilkan oleh udang, dengan penggunaan sumber C-organik ini akan menentukan efisiensi pemanfaatan nitrogen oleh bakteri. Penelitian ini untuk mengetahui pengaruh penambahan sumber C-organik yang berbeda terhadap penurunan amoniak (NH_3) nitrit (NO_2) dan nitrat (NO_3) pada budidaya udang vaname (*Litopenaeus vannamei*) sistem bioflok. Penelitian ini dilaksanakan selama 60 hari yaitu pada September sampai November 2020, yang bertempat di Laboratorium Basah Kastela Fakultas Perikanan dan Kelautan Universitas Khairun Ternate. Penelitian ini menggunakan rancangan acak lengkap dengan 4 perlakuan dan 3 kali ulangan. Perlakuan yang digunakan yaitu A (molase), B (ampas sagu), C (dedak) dan D (kontrol). Parameter pengamatan terdiri dari amoniak (NH_3), nitrit (NO_2) dan nitrat (NO_3) yang diukur 7 hari sekali sedangkan parameter pendukung yaitu suhu, pH, salinitas, dan DO diukur setiap hari sekali. Berdasarkan hasil penelitian dan pembahasan dapat disimpulkan bahwa penambahan C-organik molase menurunkan konsentrasi amoniak (NH_3), nitrit (NO_2), dan nitrat (NO_3) lebih cepat pada media budidaya udang vaname (*Litopenaeus vannamei*) sistem bioflok.

Kata kunci: Kualitas Air, Udang Vaname, Sumber karbon, Bioflok

ABSTRACT

Suri Pelu, NPM. 05171611023. **The Effect Of Different C-Organic Addition on Ammoniac decrease (NH_3) Nitrite (NO_2) and Nitrate (NO_3) on Vaname (*litopenaeus vannamei*) Shrimp Cultivation With Bioflock System.** Supervised by Mr. Dr. Gamal M. Samadan S.Pi, M.Si as supervisor I, and Dr.Yuliana S.Pi, M.Si as supervisor II.

This study aims to determine the effect of adding different organic C sources on the reduction of ammonia (NH_3) nitrite (NO_2) and nitrate (NO_3) in the culture of vaname shrimp (Litopenaeus vannamei) biofloc system. This study used a completely randomized design with 4 treatments and 3 replications. The treatments used were A (molasses), B (sago pulp), C (bran) and D (dick). The observation parameters consisted of ammonia (NH_3), nitrite (NO_2) and nitrate (NO_3) which were measured once every 7 days, while the supporting parameters were temperature, pH, salinity, and DO measured once a day. The results showed that the role of carbon molasses was able to reduce the concentration of ammonia (NH_3), nitrite (NO_2) and nitrate (NO_3) in the culture medium of vaname shrimp (Litopenaeus vaname) in the biofloc system. Based on the results of research and discussion, it can be concluded that the addition of C-organic molasses can reduce the concentration of ammonia (NH_3), nitrite (NO_2), and nitrate (NO_3) in the culture medium of vaname shrimp (*Litopenaeus vannamei*) in the biofloc system. Based on the results of the research and discussion, it can be concluded that the addition of C-organic molasses decreased the concentration of ammonia (NH_3), nitrite (NO_2), and nitrate (NO_3) faster in the culture medium of vaname shrimp (*Litopenaeus vannamei*) in the biofloc system.

Keywords: Carbon Sources, Biofloc, Water Quality, Vaname Shrimp