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DURING THE WINTER, THE PERFORMANCE OF A TEMPERATE-ZONE CHANNEL CATFISH BIOFLOC TECHNOLOGY PRODUCTION SYSTEM

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ABSTRACT

In an outdoor biofloc technology production system, channel catfish (Ictalurus punctuates) have been successfully produced. In the tropics, outdoor biofloc production systems are used all year, while channel catfish research was limited to the growth season and biofloc production tanks. Harvested and put to rest for the winter. If a biofloc production system is to be used outside, Farmers in temperate latitudes, then, throughout the winter, data gaps related to system and fish performance. This issue must be addressed. The purpose of this research was to fill up these data gaps for channel catfish culture. Low (153.3 mg/L) water from a recently finished biofloc production experiment for this research; high total suspended solids (790.0 mg/L) were maintained. Per water source, there are three 15.7-m3 tanks. For a 152-day period, each type was supplied (8 kg/m3) with market-size channel catfish from the same research. From November through April, you will be studying. During the experiment, mean chlorophyll a concentrations were comparable in both treatments. Treatments diverged after 55 days, and chlorophyll a concentration grew linearly. (P 0.001, R2 = 0.721) in the low solids treatment to a mean final concentration of 2251.7 mg/m3.AmmoniaSpikes of ammonium chloride (1.25–1.5 mg TAN) were added three times throughout the experiment. Completely biotransformed, presumably via algal absorption and nitrification. Biotransformation rate of ammonia. In the high solids (P 0.001, R2 = 0.920) and low solids (P 0.001, R2 = 0.920), was directly linked to mean water temperature. Treatments with (P = 0.002, R2 = 0.761). In biofloc tanks, catfish survival was excellent (99.75%) throughout the winter. There were no significant differences between the treatments. There was no significant difference in net fish output between the two groups. Treatments. Net fish yields, on the other hand, were 1–4% lower than starting fish biomasses. In the biofloc, there is water. Regardless of the weather, production tanks seemed to maintain their capacity to biotransform ammonia throughout the winter. Regardless of whether phytoplankton or suspended solids predominate, and despite ongoing ammonia nitrogen addition, having a functioning biofloc in the spring eliminates the need for a lengthy start-up period when establishing a new biofloc. Biofloc is completely functioning, as are the TAN and nitrite spikes.

KEYWORDS: *Biofloc Technology Channel Catfish Low Temperature, Ammonia Biotransformation.*

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