



WORLD AQUACULTURE 2011
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ABSTRACTS

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ABSTRACTS

STRESS RESPONSES OF TAMBAQUI (*Colossoma macropomum*) FED WITH B-GLUCAN SUPPLEMENTED DIETS AFTER TRANSPORT IN CLOSED SYSTEM

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Fish transportation procedures involve capture, confinement, handling, high density and transport itself. It is an unavoidable practice in fish culture. This procedure is traumatic and the stress elicited has negative effects on fish health. Thus, some substances have been evaluated to minimize the effect of stressors and improve the physiological condition of fish, such as β -glucan, polymers of glucose classified as biological response modifiers, structural components of the bacterial cell membrane and plants, which presents a potent immunostimulant action in fish. Therefore, the aim of this study was to evaluate the physiological stress response of tambaqui fed β -glucan after being transported in a closed system.

Juveniles of tambaqui ($n=180$; 35.06 ± 0.80 g; 11.8 ± 0.09 cm) were fed with different β -glucan concentration (0; 0.1; 0.2; 0.4 and 0.8% kg^{-1} diet) for 60 days. After the experimental feeding, fish were transported on paved roads for three hours in a closed system. Stress responses were evaluated by hormonal, biochemical and hematological indicators before the transportation (BT), immediately after the transportation (AT) and 24, 48 hours after the transportation (24 and 48h AT).

During the experimental period no mortality of tambaquis was measured. The cortisol and glucose levels increased immediately after the transportation compared to the control, the haemoglobin increased in the fish fed without β -glucan and the mean corpuscular hemoglobin in concentrations of 0; 0.1 and 0.2% of β -glucan. The results of this study demonstrated that the alteration in the hematological and biochemical indicators occurred immediately after the stress caused by the transportation and returned to base levels after 24 h. However the β -glucan supplementation did not reduce the stress responses.