Dietary potassium diformate (Formi) supplementation on juvenile white shrimp (*Litopenaeus vannamei*) diets for growth and survival support.

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ABSTRACT

Objective: This feeding trial was designed to assess the effects of formi (*Dietary potassium diformate*) supplementation in shrimp diet on growth and survival of white shrimp, *Litopenaeus vannamei*.

Methodology and results: Seven isonitrogenous diets were formulated with graded formi levels of 0, 1, 2, 4, 8, 14 and 20 mg kg⁻¹ of dry diet, respectively. Shrimps were randomly allocated to twenty four (24) 50 l aquariums (10 shrimps of 0.82 ± 0.08 g per aquarium, eight treatments and three replicates). Water salinity was set at 17 g L⁻¹ and the flow rate of each aquarium maintained at 2 L min⁻¹ and decreased to 1 L min⁻¹ at day 41th. Shrimps were exposed to 18:6 hours light/dark photoperiod. The results showed that water quality parameters did not vary significantly with the dietary supplementation and was optimal for growth and survival of *L. vannamei*. The maximum weight gain and survival occurred at 14 mg kg⁻¹ formi diet. However, no significant differences were observed in percent weight gain (WG), specific growth rate (SGR), feed conversion ratio (FCR) between diets with different levels of formi supplementations. The survival rate data varied between 73.33 % and 100 %. Survival rate revealed that the commercial diet had the lowest survival. At the end of the study no significant effects on the growth, survival, feed efficiency and water quality of white shrimp, *Litopenaeus vannamei* was found.

Key words: *Litopenaeus vannamei*, Potassium diformate, growth performance, survival