The Effect of *Coriandrum Sativum* as Feed Additives on Growth Performance, Immunity and Disease Resistance of Southern Platy Fish (*Xiphophorus Maculatus*)

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Ornamental fish production and trade is a profitable alternative in the aquaculture industry. Nutrition is one of the key factors to obtain a higher productivity while maintain immunity of ornamental fishes. These fishes live in an environment surrounded by stress factors. Increasing immunity via feed additives may help them to thrive such stressors. Therefore, this study was carried out to assess the effect of coriander as feed additives and immune enhancers, on growth performance, immunity and disease resistance of southern platy fish (*Xiphophorus maculatus*). Sixty healthy platy fish, of 2 months old with an average weight of 0.17 ± 0.01 g were used in the experiment. Fish were fed with coriander incorporated commercially available feed for one month. The experiment was triplicated and controls were also maintained without incorporating coriander to commercially available feed. The weight gain, length and specific growth rate (SGR) were measured. The infection trial was carried out using *Aeromonas hydrophila*. Immune response and disease resistance of fish were determined by analyzing white blood cell (WBC) count. Results revealed that the, mean length and SGR obtained from coriander fed fish were significantly higher than the control ($p<0.05$). The fish fed with Coriander incorporated feed obtained 20% of neutrophil count while fish fed without coriander incorporated feed obtained 10% of neutrophil count. In conclusion, there was a positive effect on disease resistance and immunity by the coriander incorporated feed on southern platy fishes and significant length and weight gain indicated the feasibility of using coriander as feed additives and immune enhancers in aquaculture.

Keywords: *Coriandrum sativum*; Disease Resistance; Innate Immunity; Ornamental fish; Specific Growth Rate; White Blood Cell