Potential of using origanum vulagar and zengiber officinal extract as treatment to freshwater fishes from bacterial diseases

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(1) This experiment was conducted to evaluate the use of ethanol-extracted from the medicinal plant, Origanium vulgare as a growth and immunity promoter for Nile tilapia, Oreochromis niloticus (L.) fingerlings. Fish (Average 12.33 g) were randomly distributed into four treatments; three replicates each at a rate of 15 fish per 140– L aquarium. Fish were fed one of the tested diets containing similar crude protein (30%) and gross energy (4.40 kcal / g), in addition to 0.0, 0.5 %, 1.0% or 1.5 % Origanium vulgare extract.(2) Diets were given twice daily at a rate of 3 % of live body weight, for six days a week during 10 weeks. After the feeding trial, fish of each treatment were challenged by pathogenic Pseudomonas aeruginosa and Pseudomonas flourscence, which was separately injected by intraperitoneal (I/P) injection and they were kept under observation for 10 days to follow up any abnormal clinical signs and the daily mortality rate.(3) The growth–promoting influence of Origanium vulgare extract was observed on fish. The maximum growth was observed at 0.5 % Origanium vulgare extract as compared to the control.(4) No significant differences in fish survival were reported among the experienced treatments at (P>0.05), falling within the range of 93.3 – 100%. The control fish consumed less diet and gave a higher FCR, while fish fed diet containing 0.5 % Origanium vulgare extract demonsrated the highest protein efficiency ratio (PER), apparent protein utilization (APU), and energy utilization (EU).(5) The supplementation of Origanium vulgare extract had no significant (P>0.05) effect on the fish body composition (dry matter, crude protein, fat, and ash), mean which total protein, albumin, and globulin increased significantly (P0.05), falling within the range of 93.3 – 100%. The control fish consumed less diet and gave a higher FCR, while fish fed diet containing 1 % Zingebare officinale extract demonsrated the highest protein efficiency ratio (PER), apparent protein utilization (APU), and energy utilization (EU).(12) Supplementation of Zingebare officinale extract had no significant (P>0.05) effect on the fish body composition (dry matter, crude protein, fat, and ash), mean which total protein, albumin, and globulin increased significantly (P