

Mitila Pransin 2006: Using Turmeric (*Curcuma longa*) in Goldfish (*Carassius auratus*)
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The study of using turmeric in goldfish feed was conducted by dividing into three experiments. The first experiment was to study the effect of turmeric in different levels on growth performance, digestive enzymes activity, catalase enzymes activity, thiobarbituric acid reactive substances (TBARS) and haematology. The goldfish fed with diet supplemental 0.5 % turmeric showed better growth ($p<0.05$) and diet of 0.5 and 1 % turmeric showed better feed conversion ratio and protein efficiency ratio ($p<0.05$). Effect of turmeric on digestive enzymes showed that goldfish fed with 1 % turmeric supplemented diets has highest acid protease, alkaline protease and lipase activity. TBARS and haematological values were not significantly different ($p>0.05$). The second experiment was to study the effect of curcuminoid in different levels on growth performance, pigmentation and haematology. The goldfish fed with diet supplemental curcuminoid 10,000 mg/kg showed low responsibility in growth performance and protein efficiency ratio ($p<0.05$), and feed conversion ratio was highest ($p<0.05$). Pigmentation of goldfish fed with curcuminoid 5,000 and 7,500 mg/kg demonstrated yellow shade on fish body both in left and right side. b^* values of yellow shade were 45.51 ± 6.26 and 45.49 ± 4.82 in left side and 47.03 ± 7.29 and 47.04 ± 5.53 in right side, respectively. Haematological values were not significantly different ($p>0.05$). The third experiment was study on the digestibility of turmeric 3 and 5 % and curcuminoid 5,000 and 10,000 mg/kg feed, the result were 79.75 ± 0.60 , 71.79 ± 1.12 , 97.14 ± 0.31 and 98.96 ± 0.03 %, respectively. Therefore, diet incorporated with 1% turmeric was appropriated for growth and feed efficiency and supplemental curcuminoid 5,000 mg/kg feed was optimum level to enhance yellow pigmentation in goldfish.

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Orapint Jintasataporn 22 May 2006

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