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Effect of Dietary Waste Date Meal (Phoneix dactylifera) on Chemical Body Composition, Nutrition Value and Fatty Acids Profile of Fingerling Common Carp (Cyprinus carpio)

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Abstract : Effect of waste date meal (WDM) addition to the diet on body chemical composition and fatty acids profile of fingerling cyprinus carpio were evaluated. Four treatments with 3 replication such as control treatment (no additional WDM; T1), 5% WDM (50 gr/kg; T2), 10% WDM (100 gr/kg; T3) and 15% WDM (150 gr/kg; T4) were done. 168 fish with initial weight of 2.48±0.06 gr were fed 3 times per day according to 5 % of fish body weight for 12 weeks. The body composition results showed that there is no significant differences between treatments (P>0.05). All of Fatty acids profile parameters show significant differences between different treatments (P<0.05). Although, the highest value of MUFA+PUFA, PUFA/SFA, MUFA+PUFA/SFA, W3, EPA+DHA parameters belong to control treatment (T1) and 5% WDM treatment (T2) had lowest value of MUFA, PUFA, MUFA+PUFA, PUFA/SFA, MUFA+PUFA/SFA, W3, W3/W6, DHA/EPA and EPA+DHA parameters except of SFA and W6/W3 that show highest value than other treatments. Atherogenic index (AI) had no significant differences between different treatments (P>0.05) but Thrombogenic index (TI) had significant differences between different experimental treatments (P<0.05). The 5% WDM and control treatment show highest and lowest values. Generally, treatments of 10 and 15% WDM (T3-T4) had moderate performance than the other experimental treatments. Finally, addition of WDM to common carp fingerlings diets help to insignificant improvement of chemical body composition and the saturated and unsaturated fatty acids profile of them were significant.

Keywords : waste, date, common carp, nutrition value
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