

ABSTRACT

This research was conducted to determine the phytochemical and antioxidant potential of *Dichanthium annulatum* (Forssk.) Stapf. and *Impereta cylindrica* (L.) Beauv. as well as to examine the effect of *Dichanthium annulatum* (Forssk.) Stapf. on growth performance, oxidative enzymes, and histological studies of the intestine of grass carp, *Ctenopharyngodon idella*. Proximate and GC-MS analysis of *Dichanthium annulatum* were also carried out. Proximate analysis of the *Dichanthium annulatum* showed 91.64% dry matter, 8.36% moisture, 23.10% crude protein, 16.30% crude fiber, 9.0% fat, 11.66% ash and 39.94% NFE. The methanolic extract of *Dichanthium annulatum* (Forssk.) Stapf. was analyzed by GC-MS analysis and the major compounds were Bis(cyclopentadienyl)molybdenum (68.8%), Hematoporphyrin (23.3%), Delsoline (4.86%) and 1,4:5,8-Dimethanonaphthalene (1.37%). The results also concluded that the group fed with 25% diet showed highest result in weight gain. Intestinal morphology of grass carp fed with diets with different levels of *Dichanthium annulatum* (Forssk.) Stapf. showed normal intestinal layers like serosa, mucosa and sub mucosa in the control while villi surface area increased in fish intestine fed with *Dichanthium* supplements as compared to the control group and it can be used as fish food in the diet of grass carp.