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Nutritional and Anti-nutritional contents of alternative plant feed ingredients for fish feed formulation

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This study emphasizes the importance of plant sources as alternative ingredients for formulation of fish feed instead of high cost fish meal. In the present study, leaves of sweet potato, banana, soybean, salvinia, papaw, *Gliricidia*, Habarala, and jack seed powder were used. Those ingredients were subjected to proximate analysis and mineral analysis and also evaluated for the presence of anti- nutrients such as Saponin, Phytic acid and Cyanide. The protein content in those ingredients was estimated to be in between 9.66-29.32g/100 g and the range of crude lipid was recorded as 0.8- 11.6 g/100 g. The results showed the moisture content and ash content of the ingredients to be as 73.75-93.00 g/100 g and 5.21-19.24 g/100 g respectively. The analyzed ingredients had trace amounts of Na, P and K which ranged between 0.49 – 2.71 g/100 g. All the tested ingredients contained Saponin (0.79- 5.58 g/100g), Phytic acid (0.07- 0.81g/100g) and Cyanide (56.50-436.50 mg/100g). According to the nutritional composition results, some of the plant based ingredients can be used for the fish feed preparation.

Key words: Anti-nutrients, Cyanide, Phytic acid, proximate analysis, Saponin

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