

4 pillars of excellence in fish nutrition

Rearing of fish is increasingly becoming common but there are pillars that need to be focused on by researchers and/or farmers when formulating or feeding fish.

The major pillars in fish nutrition are palatability, performance, pollution control and planet. Palatability is the most important pillar since it has effects on the other pillars of performance, pollution control and the planet. Palatability is divided into taste and maximum feed intake. Taste is the short term effect of a feed on the fish and the ability of the fish to adopt to the taste.

Other pillars

A few days after adaption to the feed, the maximum feed intake of a fish can be quantified. This is the most important pillar to farmers since it determines the maximum growth potential. It is not only the taste that affects the maximum feed intake of the feed because maximum feed intake is strongly related to the energy level of the feed. Higher energy levels results into a lower maximum feed intake.

Performance. Fish feed contains a certain amount of energy which is mainly derived from the dietary macro nutrients ie protein, fat and carbohydrates. This dietary energy is used as a predictor for growth in feed formulation. When fish eat feed, not all the feed is digested; some remains undigested and is unavailable to the fish. Some of the digested energy is lost through metabolic processes hence the dietary energy that is finally available to the fish for both growth and maintenance is Net energy.

After the feed is eaten, the fish excretes faeces and ammonia

and hence pollution must be minimize to minimize the effect to the environment.