

Spawning performance of striped knifejaw, *Oplegnathus fasciatus* fed graded levels of ascorbyl-2-monophosphate Mg²⁺ as vitamin C source [2008]

Abstract

This study aimed to improve spawning performance of striped knifejaw using ascorbyl-2-monophosphate Mg salt (APM) as a dietary ascorbic acid (AsA) source. Five experimental diets, a control diet 1 without APM and four test diets 2-5 with 500, 1,000, 3,000 and 6,000 mg AsA/kg diet in an equivalent basis of APM, respectively, were prepared using a semi purified fish meal basal diet. Each diet was fed to duplicate broodfish groups consisting of 4 females and 2 males, having mean body weight of 587 and 595 g, respectively, once a day for 21 weeks, from April 2006. Dietary APM promoted earlier onset of spawning and induced a tendency of improving egg quality; diet 2 had higher tendencies in egg production, buoyancy, hatching rate and larval survival activity index. Dietary APM significantly correlated to AsA levels in eggs. Groups fed diets 4 and 5 tended to induce higher abnormal larvae than groups fed diets 1-3. These results revealed that the broodfish of striped knifejaw effectively utilized APM as a dietary AsA source and promoted the early onset of spawning and performance; but high dietary APM might cause ill effects on egg quality.