

An unconventional dietary ingredient from sea urchin stimulates gonad development in white shrimp (*Litopenaeus vannamei*)

ABSTRACT

Importance of shrimp as a high quality seafood is growing worldwide. Quantities from capture fisheries are unable to meet the human requirement. Aquaculture seeks to bridge the gap between the supply and demand but the aquaculture production is constrained by inadequate availability of high quality seed for farming. While the number of hatcheries producing seed has grown, the problem of egg quality still remains a challenge. The most important factor is broodstock nutrition. Several feeds are available but failure of gonad maturation and fertility are quite common. This study was carried out to determine the effects of an unconventional diet in the form of sea urchin roe and a commercial feed. The two dietary treatments produced significant ($P < 0.005$) difference in the gonad development. The gonado-somatic index (%) of the test specimens offered sea urchin roe was 10.3 ± 0.5 while it was 7.0 ± 1.0 in the shrimp stock provided the commercial feed. These differences are discussed in this paper.