

## Variability of Product Quality and Profitability of Fish Farms in Greece

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**Abstract :** The method and rearing conditions of aquaculture may vary between different regions and aquaculture sites. Globally, the Aquaculture industry faces a challenge to develop aquaculture methods which safeguard the economic viability of the company, the welfare of farmed fish and final product quality and sustainable development of aquaculture. Marine fish farms in Greece operate in different locations and farmed fish are exposed to a variety of rearing conditions. This paper investigates the variability of product quality and the financial performance of different marine fish farms operating in West Greece. Production parameters of gilthead sea bream fish farm such as feeding regimes, mortalities, fish densities were used to calculate the economic efficiency of six different aquaculture sites from West Greece. Samples of farmed sea bream were collected and lipid content, microbial load and filleting yield of the samples were used as quality criteria. The results indicate that Lipid content, filleting yield and microbial load of fish originating from different fish farms varied significantly with improved quality exhibited in fish farms which exhibited improved Feed conversion rates and lower mortalities. Changes in feeding management practices such as feed quality and feeding regimes have a significant impact on the financial performance of sea bass farms. Fish farms which exhibited improved feeding conversion rates also exhibited increased profitability. Improvements in the FCR explained about 13.4 % of the difference in profitability of the different aquaculture sites. Lower mortality and higher growth rates were also exhibited by the fish farms which exhibited improved FCR. It is concluded that best feeding management practices resulted in improved product quality and profitability.

**Keywords :** fish quality, aquaculture management, feeding management, profitability

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