

Fisheries Economy

Prof. Dr. Hasan Hüseyin ATAR
Prof. Dr. Nilsun DEMİR

Monitoring Economic and Financial Performance of Aquaculture Businesses

- Efficient management of a farm can make the difference between profits and losses especially in years with unfavorable prices and costs. However, farm management involves more than just taking care of the biological processes involved; it includes paying close attention to economic and financial measures of the farm business.

- Few farmers enjoy spending time on financial analysis, but doing so is essential to the success of the business. Even if the business retains an accounting firm to generate the analyses, spending time to use the results to plan to make improvements is necessary.

Production Efficiency

- Production efficiency refers to the biological performance of the farm. Monitoring the efficiency of the aquaculture business begins with evaluating these biological factors. The first such measure to monitor is the total production from the farm, or gross yield. Gross yield is measured in weight of the production per unit area (lb/acre or kg/ha for pond production and lb/cubic foot or kg/cubic meters for cages). Net yield is the gross yield minus the weight of the fingerlings or postlarvae stocked.

- In the Table the gross yield of catfish was 4,500 lb/acre while net yield, after subtracting out the weight of fingerlings stocked was 4,318 lb/acre. Over time, increases in gross and net yield will result in reduced production costs and greater productivity.

Table | Production Efficiency Measures, 256-acre Catfish Farm.

| Measure | Calculation | Unit | Farm value |
|--------------------------------|--|---------|------------|
| Gross yield | Weight of fish sold \div number of acres | lb/acre | 4,500 |
| Net yield | (Weight of fish sold - weight (lb) of fish stocked) \div number of acres | lb/acre | 4,318 |
| Survival | (Number of fish sold \div number of fish stocked) \times 100 | % | 79% |
| Average size of fish harvested | Weight of fish harvested \div number of fish harvested | lb | 1.5 |
| Growth rate | (Average size of fish harvested - average size of fish stocked) \div number of days of production | g/day | 2.2 |

- Net yield measures the gain in production over time and is the more accurate measure of biological efficiency. Gross yield is the weight sold and is used to calculate the total revenue for the business. Monitoring yields following management changes on the farm will provide a basis for understanding the effects of the change.