

Abstract

Fish seed production is a fundamental pillar of aquaculture development. It ensures the sustainability and growth of the sector, particularly in regions where wild fish stocks are declining and demand for fish protein is rising. This study investigated the status of fish seed production in Zambia, focusing on key challenges and opportunities across ten provinces. Semi-structured questionnaires were used to collect data from fish seed producers. The study revealed that most facilities were privately owned (78.4%), and a significant portion of operators had up to 5 years of experience (60.8%). Most hatcheries produce tilapia fish seed, particularly *Oreochromis* species. Key challenges included inadequate quality broodstock, low investment, lack of qualified personnel, poor quality feed, stress management issues, high input costs, and limited technical knowledge. These challenges were prevalent across provinces, with 100% of the respondents in Eastern, Luapula, and Western provinces suggesting inadequate quality broodstock and low investment as major obstacles. Conversely, several opportunities were identified to improve the fish seed production sector. Strong political will and government support were highlighted by 100% of respondents in several provinces. High demand for fish seed, favorable climatic conditions, available technology, and access to land for expansion were universally noted as positive factors. Additionally, key infrastructure and support from non-government organizations (NGOs) were identified as important enablers. Addressing these challenges through targeted interventions and capitalizing on available opportunities will be essential for advancing aquaculture in Zambia.