

# ASSESSING FEED QUALITY AND FINGERLING AVAILABILITY AS CONSTRAINTS TO SMALLHOLDER AQUACULTURE IN LIBERIA

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## INTRODUCTION

Aquaculture plays a vital role in food security and rural livelihoods in sub-Saharan Africa, yet the sector in Liberia remains underdeveloped and largely subsistence-based. This study assesses the sector's current state and its major constraints, focusing particularly on feed and fingerling supply.

## OBJECTIVES

- Assess feed types, cost, and quality
- Examine fingerling sourcing and quality
- Compare constraints across Margibi, Bong, and Nimba counties
- Propose evidence-based recommendations

## METHODS

Structured questionnaires were administered to 12 farms across three counties.

The data include sustainability factors, constraints, and issues related to feed and fingerling supply. Findings were analysed using descriptive statistics and Likert-scale ranking.

## CULTURE SPECIES IN LIBERIA



Figure 1a: Tilapia



Figure 1b: African catfish



Figure 1c: African bonytongue

## KEY FINDINGS

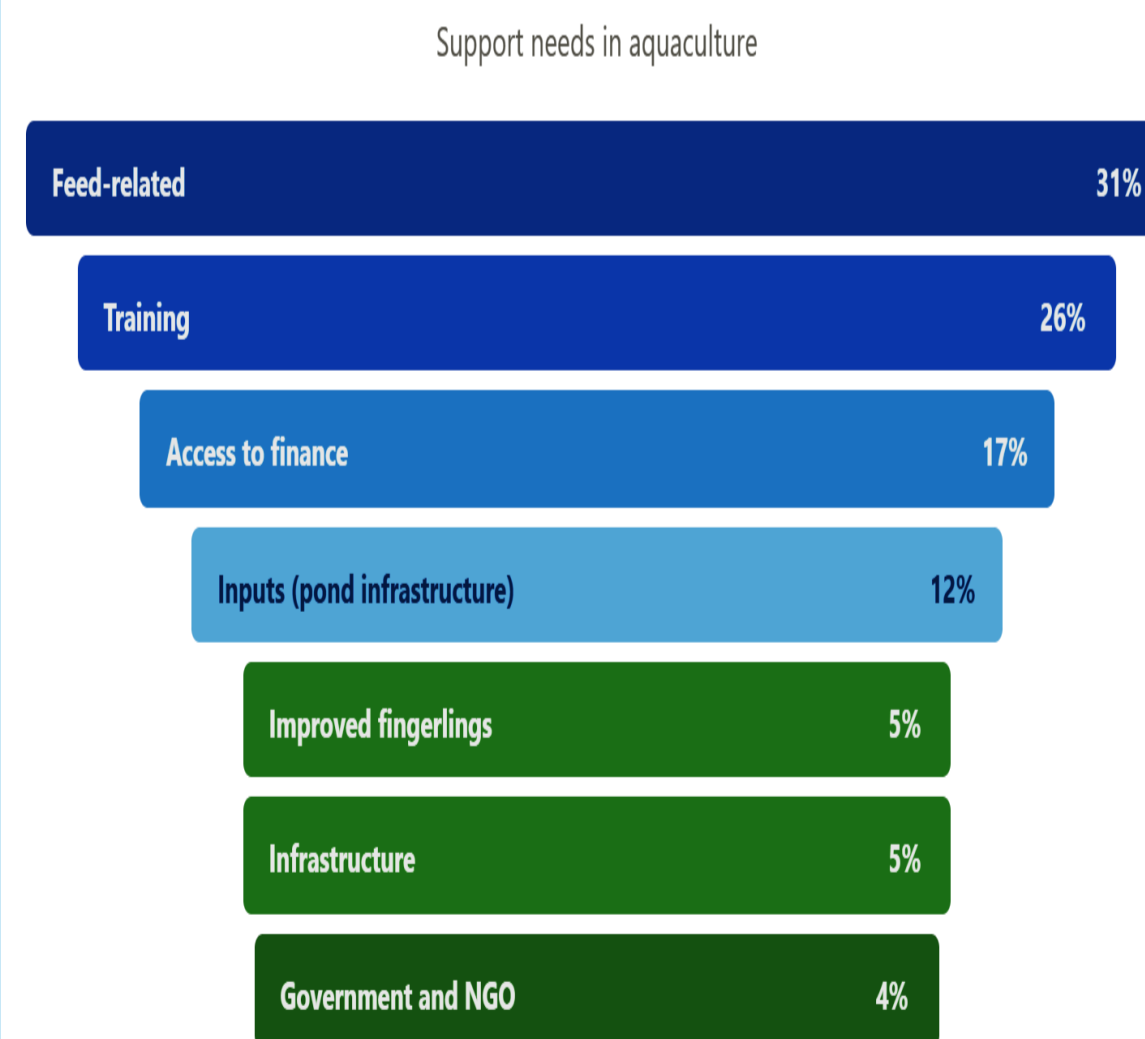


Figure 2: Sustainability factors

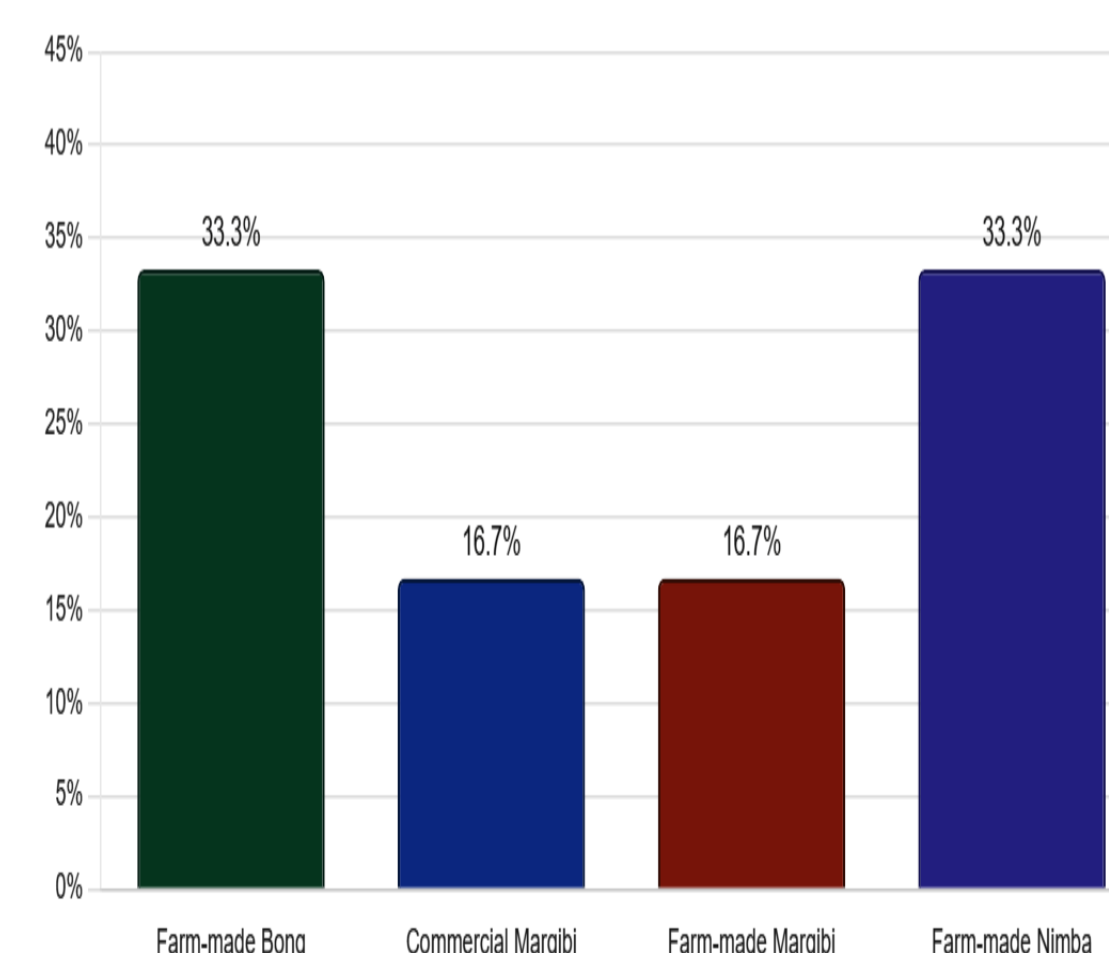


Figure 3: Distribution of feed types utilised by smallholder fish farmers

Table 1: Rank of challenges facing smallholder aquaculture farmers

Challenges	Weighted Mean	% Importance	Index of Rank
Feed cost	5.0	100.0	1
Feed quality	5.0	100.0	2
Feed availability	4.9	98.3	3
Finance access	4.9	98.3	4
Seed quality	4.6	91.7	5
Technical know-how	3.8	76.7	6
Seed availability	2.8	55.0	7
Seed cost	2.3	45.0	8
Disease	1.8	35.0	9
Market access	1.6	31.7	10

All surveyed farmers practice polyculture, a practice commonly linked to subsistence farming in Africa (Fig.1). Key needs for sector growth include improved feed availability, quality, and affordability, as well as better access to training and finance (Fig. 2). Most smallholder farmers in Liberia rely on farm-made feed, while only a small minority use commercial feed (Fig. 3). Overall, feed cost, quality, and availability, along with limited access to improved fingerlings, training, and finance, remain the main constraints to aquaculture development in Liberia (Table 1).

## CONCLUSION

Liberia's smallholder aquaculture remains largely subsistence-based, constrained primarily by poor-quality feed and fingerlings, as well as inadequate access to training and finance. Strengthening input supply systems, especially reliable, affordable feed and improved fingerlings, is essential for sustainable sector growth.

## RECOMMENDATIONS

- Develop a domestic feed industry using locally available raw materials.
- Establish a national program for supplying healthy, monosex tilapia fingerlings.
- Provide regular aquaculture training to strengthen farmers' skills.
- Create aquaculture-specific microcredit and input-credit schemes.

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