NASENI | NATIONAL AGENCY FOR SCIENCE AND ENGINEERING INFRASTRUCTURE
THE PRESIDENCY

# MEMO

**Date:** 18 September, 2025
**To:** Coordinator, NASENI Research Commercialization Grant Program

**Ref.: PEDI/AD/PP/11/1/7B**
**Subject: Market Survey Report NASENI ProHatch 300 (Dual-Powered Portable Hatchery)**

Owner of Survey: PEDI Ilesa
Product of Interest: PEDI ProHatch 300
Survey Environment: Nigeria (All 6 Geopolitical Zones)
Proposed Selling Price: ₦ 3,200,000 per unit

## 1.0 Introduction

PEDI Ilesa has developed a new Hatchery with improved features such as Smart embedded 300-egg capacity portable hatchery designed to operate on low energy consumption using both grid electricity and solar power. The purpose of this survey is to evaluate the marketability of this product within Nigeria's six geopolitical zones. The survey examines potential users, prevailing market prices of similar products, drawbacks, opportunities for market penetration, and the estimated profitability for PEDI.

## 2. Survey Scope and Methodology

The market survey covered all six geopolitical zones in Nigeria: North Central, North East, North West, South East, South South, and South West. Information was gathered through real and projected market data, interviews with vendors, and user preferences across urban and rural communities. Where real data was unavailable or insufficient, assumed values were used for estimation purposes.

### 3. Expected Categories of Users

- Small/medium-scale poultry farmers
- Independent hatchery operators
- Agricultural cooperatives & clusters
- Vocational/educational institutions
- Government & NGOs for empowerment and rural projects

### 4. Typical Market Price of Similar Products

- Imported hatcheries: ₦3,500,000 – ₦6,000,000
- Locally fabricated low-tech incubators: ₦1,500,000 – ₦2,000,000
- ProHatch 300: ₦3,200,000 (competitive mid-range, with advanced features and local service support).

### 5. Estimated Market Demand by Geopolitical Zones (100 Units Total)

Estimated Market Demand by Geopolitical Zones:

| Geopolitical Zone | Estimated Units |
|---|---|
| North Central | 15 |
| North East | 10 |
| North West | 20 |
| South East | 20 |
| South South | 15 |
| South West | 20 |
| Total | 100 |

**6. Drawbacks Identified**

- Higher cost than local fabrications
- Limited awareness of NASENI products
- Requires training for effective use
- Electricity reliability challenges in rural areas
- Perception bias in favor of foreign brands

**7. Competitive Advantages**

- Dual power (grid + solar) ensures continuous operation
- Low energy consumption reduces operating cost
- Automated controls improve hatch success rates
- Portable and easy to transport
- Locally available spares and servicing

**8. Profitability Estimation (Prototype Production)**

Selling Price: ₦3,200,000

Prototype Production Cost: ₦2,778,732

Profit per Unit (prototype): ₦421,268

With 100 units sold annually at prototype cost: Total Annual Profit = ₦42,126,800

**9. Mass Production Cost Analysis**

Prototype unit cost (prototype-scale production) = ₦2,778,732.

In mass production, economies of scale reduce unit costs (bulk purchasing, tooling, streamlined assembly, local sourcing).

Estimated mass production cost reduction: 20–30%.

Estimated mass production unit cost range: ₦2,000,000 – ₦2,200,000.

Profit per unit at mass production cost (₦2,000,000) = ₦1,200,000.

Profit per unit at mass production cost (₦2,200,000) = ₦1,000,000.

Estimated annual profit (100 units) under mass production: ₦100,000,000 – ₦12,000,000 (midpoint ≈ ₦110

million).

**10. Marketability Assessment**

Although the reduced market size projects 100 units annually,
the ProHatch 300 still offers strong commercial potential. Demand is highest in the South West, South East, and North West due to greater poultry farming intensity. Bulk procurement by government, NGOs, and cooperatives
is expected to be the main driver of adoption. Mass production economics significantly improve profitability and
price competitiveness versus imported alternatives.

**11. Conclusion & Recommendations**

The NASENI ProHatch 300 remains a highly marketable product. Key recommendations:

1. Move towards scaled manufacturing to benefit from lower unit costs.
2. Invest in tooling and supplier agreements to capture the estimated 20–30% cost reduction.
3. Offer promotional/financing schemes to early adopters (instalments, lease-to-own).
4. Strengthen after-sales service and spare-part networks nationwide.
5. Target large-volume buyers (government projects, NGOs, cooperatives) to accelerate deployment and reduce costs per unit.

Dr. Adeyinka Taofeek TAIWO

Principal Investigator