

# Organic Aqua Fresh

Harvesting Nature's Full Potential



Prepared by: Yosvany Alex Acosta

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## I. The Modular Ecosystem: Engineering the Equilibrium

ESA Organics utilizes a "decentralized loop" where every piece of hardware solves a specific biological or cost constraint.

### Core Infrastructure

- **Hatchery & Nursery (Aqua 60/5000):** Provides an unlimited, pathogen-free fish stock in under 60 sq. ft.
- **The Brain (IAS1200):** An Intelligent Aquaponics System that auto-corrects water quality, feeding, and nutrients. It produces **5,000 lbs of fish/year** and supports up to 144 growing towers.
- **Vertical Growth (TS40/TS60):** Uses a vacuum-pressure design to deliver CO2 to roots, accelerating growth by **30–40%** and focusing 70% of plant energy on the canopy.
- **Specialized Growth (GS8 & HGS8):** \* **GS8:** High-volume germination (96k+ plants).
  - **HGS8:** Targets the "baby leaf" market (8-10% of total leafy green sales) with a capacity of **8,400 lbs/year**.

## II. Economic Impact: Slashing Production Costs

ESA technology directly addresses the three largest overheads in agriculture: **Labor, Energy, and Resources.**

### 1. Cost Per Pound Comparison

The integration of automated controllers and modular design significantly undercuts traditional farming.

Metric	Traditional Agriculture	ESA Organics	ESA Advantage
Cost Per Pound	\$0.60 – \$0.62	\$0.41	~33% Lower
Time to Harvest	48 – 52 Days	< 35 Days	30% Faster
Water Efficiency	<3%	97%	97% Savings



## 2. The Revenue Multiplier (By-products)

Unlike traditional farms, ESA systems produce secondary income streams that further offset OpEx:

- **Premium Protein:** High-grade fish sales.
- **Organic Fertilizer:** The Anaerobic Digester (AD) converts roots and fish solids into liquid/solid fertilizer.
- **Energy Recovery:** The AD captures methane gas for electricity and \$CO<sub>2</sub> for plant enrichment.

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## III. Sustainability: The 1-Acre Revolution

The "Equilibrium" isn't just biological—it's spatial and environmental.

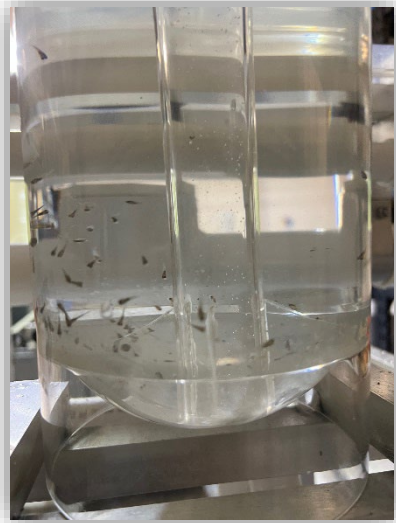
- **Land Replacement:** One acre of ESA-equipped facility replaces **600 acres** of traditional land.
- **Zero Runoff:** The closed-loop Anaerobic Digester ensures no chemical or nutrient discharge enters the local ecosystem.
- **Food Security:** Decentralized modules can be deployed in any climate, providing consistent local food supplies with a minimal environmental footprint.

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## The Brain (IAS1200):



## Vertical Growth (TS40/TS60):



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## Specialized Growth (GS8 & HGS8):

