Food Security Technology Inc.

Multi-Culture Closed Recycling Seafood & Freshwater Hatchery & Ongrowing Production

Proposal prepared for: [Liberia]
Prepared by: Quentin Koromete, Chief Engineer & Inventor
Date: -_____, ____ 2025

Executive Summary

Food Security Technology Inc. (FST) proposes a strategic "**Joint Venture"** to revolutionize Agriculture and Aquacultural production through groundbreaking technology that defies all academic understanding, creating a new Multi-Culture Closed Recycling System to be utilized within the country for food SOVEREIGNTY.

FST is offering Countries this opportunity to engage and develop long-term food sovereignty for families and the community to overcome food insecurity, for greater health and community wellbeing, growing into an economic and prosperous future for the Country.

After 40 years of research and development, FST has perfected the only technology that addresses the aquaculture industry's most significant challenge: **pollutant discharge**.

At the same time, it created a new, plant-ready, "*better than organic*" **fertilizer** from the waste, sustainably producing nutrient-dense, healthy vegetables and seaweeds for seawater, adding a valuable second income stream of edible products or used as a feed-source for shrimp and shellfish, all the while creating exponential profit margins or used as essential food sources for local consumption at minimal cost.

To test the waters with a 2-year diploma from Deakin University, Australia, funded by Te Ohu Kai Moana, being the Sovereign Maori Fishing Company, of New Zealand in 2000, only to find out the **Aquaculture Industry knew nothing about closed-recycle systems**, nor **zero discharge** from fish farming systems, which had already been discovered, achieving what was considered impossible—abalone spawning within a closed-recycle system by default.

The true Miracle in this proposal is that the **Aquaculture Industry is going to be the Panacea** for solving the world's food shortage, because of the efficiency in fish and food production, which is also essential for good health in human development. However, the current **Monoculture single-species farming design** is fatally flawed, and now with **ENVIROCULTURE**™ technology, FST has developed the only viable option to provide true **sustainable, eco-friendly, and affordable** mass food production of high-quality produce using minimal resources.

Technological Breakthroughs

- **Food Security**: for Families and Communities, through sustainable, efficient, environmentally friendly, and accessible food of both protein and vegetables for all.
- **Environmental Protection**: Zero-discharge technology that repurposes waste into nutrient-dense plant-ready fertilizer and is destined to eliminate **"food waste"** from the food distribution chain.
- **Resource Protection**: By reseeding the oceans, lakes, and waterways using the new hatchery technology, all aquatic fauna can be restored to their original abundance.
- **Economic Development**: New multi-culture food production farming creates greater food stability, health, and well-being, job creation, new skills, national food security, export opportunities, and US Prosperity.
- **Technological Leadership**: This disruptive technology will replace the current inefficient monoculture farming practices, such as the Aquaculture, Hydroponics, and Agriculture Industries, cutting food miles and the carbon footprint by 90%, while producing high-quality, healthy food at minimum cost.

This technology enables:

- Production of up to **1,000,000 lbs. of tilapia** and **5,000,000 lbs. of vegetables** annually
- This system provides food security for **15,000-20,000 people** on just **7 acres** of land
- Complete elimination of waste discharge by conversion to plant-ready organic fertilizer
- 20x greater productivity than conventional crop farming, producing all year round
- Systems are self-sufficient, sustainable, extremely efficient, minimizing operation costs
- Deployed in any environment, conserves 98% water use, reduces food costs by 95%
- This system includes hatchery technology for replacement stock and plant protein fish feed

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Key Milestones:

- **2000:** Acquired unique specialized Aquaculture knowledge, discovering the industry had no solutions to pollutant discharge, nor the workings of saltwater closed-recycling systems.
- **2004:** Built the first community-sized closed-recycle seafood hatchery in New Zealand, showcased on national television.
- **2012:** Developed a freshwater closed-recycle system to provide the healthiest, home-grown food for the family to overcome a life-threatening chronic health disease, taking only two years of healthy food living to full recovery!
- **2020:** Perfected a large-scale closed-recycle system producing 1,000lbs of fish and 5,000lbs of vegetables per year, powered by 125watts, to showcase a prototype commercial system at Alabama A & M University research center, within a 3,000sqft greenhouse, including fish feed in preparation for mass food production.

Disruptive Technological Inventions

While the global aquaculture industry struggles with pollution, inefficiency, and a stalling growth rate at below 3%, despite billions in research investments, **FST offers the only comprehensive solution.**

1. Accelerated Nitrogen Fixation (ANF)

The Problem: Chemical fertilizer is energy-intensive to make and environmentally destructive.

Our Solution : ANF technology converts organic waste from (food scraps, fish waste, animal waste, plant waste) into plant-ready nutrient-rich liquid organic fertilizer with minimal energy input. This process:

- Eliminates environmental harm
- Promotes healthy soil biodiversity
- Supports thriving aquatic ecosystems
- The fertilizer produces nutrient-rich, "better-than-organic", healthy food

2. BONANZA™ System

BONANZA™ is an acronym for (Biological, Organic, Natural, Atmospheric, Nitrification, Zyme, Accelerator) is our proprietary waste conversion system that:

- Accelerates biological decomposition, from months to minutes
- Eliminates the active ingredients in GMOs, chemical pesticides, and microplastics, at the same time creating plant-ready liquid organic fertilizer
- Transforms waste instantly into plant-ready liquid organic fertilizer
- Creates the critical link between fish production and plant utilization of waste
- Operates through a unique one-way valve system, ensuring quality plant nutrition

3. ENVIROCULTURE™ New Food Standard

ENVIROCULTURE™ replaces toxic Mono-Culture farming with Multi-Culture farming technology that:

- Increases food productivity up to **20 times** over conventional methods
- Creates portable, self-sufficient, sustainable growing systems of accessible low-cost food
- Reduces carbon footprint, and food waste by 95% and 99.9% respectively
- Enhances soil biodiversity, aquatic restoration and the natural environment
- Produces nutrient-rich, Better-Than-Organic healthy food for the family

4. NEW HATCHERY TECHNOLOGY

The technology controls the entire life cycle and hatchery environment to reproduce every type of fish and shellfish on demand:

- The hatchery is a closed, recycled, controlled environment with pristine quality water year-round
- Allows reseeding of depleted natural seafood stocks anywhere on the coastline, lakes, and rivers
- Can prevent the extinction of any aquatic fauna, back to their once original, prolific natural stocks.
- Provides replacement stock from production harvesting, saving on juvenile and fingerling costs
- Secures the permanent sustainability of farmed and wild-caught species

Industry Challenges:

- **Chinese aquaculture** (66% of global production) has moved fish farming operations to floating ships in the deep ocean to hide pollutant discharge.
- **Atlantic Sapphire's Miami Florida operation** lost $55M (2020), $133M (2021), $65M (2022), $133M (2023), and $167M (2024) due to fish die-offs and poor water quality management of an RAS operation.
- **Traditional RAS and Cage-Net Ocean Farming** continue to face water quality issues and public scorn from environmental pollution.
- **America's** average **Aquaculture** Production and Growth Rate between **2000-2022 is 0.4%, World is 5%.**

The FST Difference:

1. **Zero environmental discharge** – complete waste conversion to valuable fertilizer
2. **Integrated hatchery operations** – no need to purchase fingerlings. nor externally
3. **On-site feed production** – dramatically reduces total operational costs
4. **Value-added entire fish processing** – increasing profit margins by 100-200%
5. **Repurpose bones, blood, and guts**—convert to valuable nutrient-dense fertilizer
6. **5 x vol. plant production, 2nd Income** – generating additional revenue streams
7. **Environmentally friendly, in the public's favor** – earning premium prices
8. **ENVIROCULTURE™** ***Better-Than-Organic*** – nutritionally healthy, favored fish & veg

Mono-Culture Farm, (Old System)	**Multi-Culture Farm, (New System)**
High Operation Cost	Half Conventional Operation Cost
Discharge waste to environment	Zero Discharge, convert waste to fertilizer
Buy fingerlings (10% operation cost)	Integrated hatchery (0.5% operation. cost)
Buy GMO feed (65% operation cost)	Grow own feed (10% operation cost)
Sell whole fish (10-25% profit)	Process whole fish, filet (100-200% profit)
No vegetable production	Vegetable by-product (500% profit)
Major environment discharge issues	Environmentally beneficial, winning public favor
Public disdain, toxic food, No support	Strong consumer support of premium pricing

Table 1. Showing Volume, Fish & Feed/Food Production, and Build Cost

- **The FST systems can be scaled to meet various production targets**
- **The species include Tilapia, Salmon, Shrimp, and one Species of Choice**.
- **Either one species or all four species can be chosen in this proposal.**
- **The cost to build each species includes:**

  a. **An integrated hatchery with a building**

  b. **Raising fish or shellfish for production in a building**

  c. **The BONANZA™ conversion of waste to fertilizer in a building**

  d. **Integrated vegetable production using the BONANZA™ fertilizer in a controlled environment greenhouse**

  e. **Fish Feed growing is established for production in adjacent fields**

  f. **Integrated seaweed production for Shrimp using BONANZA™ fertilizer for feed in open air (***snowbelt locations will require cover protection***)**

  g. **Processing includes live delivery, filleting, fishmeal, smoking, vacuum packaging, and plate-ready**

Projected costs for these systems are based on the minimum starting cost of fish or shellfish production volume per year as follows:

The Table of Contents in Columns: 1. Species, 2. Fish Volume in lbs/year, 3. Cost to build in lbs. 4. Total Fish Build Cost. 5. Plants. 6. Feed/Food Volume in lbs/year, 7. Cost to build in lbs. 8. Total Feed/Food Build Cost. 9. Grand Total Cost of Species Volume.

Table 1. The Cost of Building the Fish and Feed Growing Systems, in US$

1	2	3	4	5	6	7	8	9
Species	**Fish lbs/yr.**	**/lb**	**Build Cost**	**Plants**	**Feed lbs/yr.**	**/lb**	**Build Cost**	**Grand Total**
Tilapia	5,000	$15	$75,000	**Vegetable**	25,000	$6	$150,000	$225,000
Tilapia	100,000	$10	$1,000,000	**Vegetable**	500,000	$4	$2,000,000	$3,000,000
Tilapia	1,000,000	$5	$5,000,000	**Vegetable**	5,000,000	$3	$15,000,000	$20,000,000
Salmon	5,000	$18	$90,000	**Vegetable**	25,000	$6	$150,000	$240,000
Salmon	100,000	$12	$1,200,000	**Vegetable**	500,000	$4	$2,000,000	$3,200,000
Shrimp	5,000	$25	$125,000	**Seaweed**	25,000	$12	$300,000	$425,000
Shrimp	100,000	$18	$1,800,000	**Seaweed**	500,000	$8	$4,000,000	$5,800,000

4th Species being a local fish or shellfish of choice, at the Country's request.

Aquaculture Investment Profit / Loss @ Year 2.

Example: **Total Cost to build 1 million lbs of fish, 5 million veg production/year = $20,000,000.**
Operation Cost of Fish production $0.80/lb x 1,000,000 lbs = $800,000
Processing and Packaging Cost of Fish $1.50/lb x 1,000,000 lbs = $1,500,000
Operation Cost of Vegetable production $0.30/lb x 5,000,000 lbs = $1,500,000
Total Production Cost $800,000 + $1,500,000 + $1,500,000 = $3,800,000

Fish Income: $6.0/lb. x $1,000,000 = $6,000,000
Vegetable Income: $4.00/lb. x $5,000,000 = $20,000,000
Total Income: $6,000,000 + $20,000,000 = $26,000,000

Total Net: Production Cost -$3,800,000 plus Gross Income $26,000,000 = $22,200,000/yr.

Calculations/Assumptions of Profit/Loss upon known facts:

- **Extremely efficient, portable, sustainable, fresh local fish feed "*better than organic*"**
- **Feed, Comfrey and Maringa are highest in Protein, antibiotics, antioxidants, Omegas 3**
- **No (wild caught, antibiotics, hormones, chemicals), pristine water conditions 24/7**
- **Raised on hatchery technology using spirulina and brine shrimp as primary feed**
- **Farming operations are environmentally responsible and beneficial to the community**
- **Fish processed, smoked fillets, meal, packaged for market, balance recycled**
- **Production eliminates food miles, carbon footprint, and huge cost reduction**
- **Fish products sold under the new food standard ENVIROCULTURE™ brand**

High Consumer support allows premium price Tilapia fillet @ $15/lb, fishmeal @$3/lb

1 lb. fish, 0.30 lbs of filets @ $15/lb and **0.50 lbs of fishmeal @ $3/lb, balance 0.2lb recycled**

Tilapia Income: for 1 lb. is 0.30 x $15 = $4.5 + 0.50 x $3 = $1.5 = total of $6.0/lb

Less the cost of production:

(Using old system values) = $1.60, new system, reduces cost by half,

Cost of fish production/lb: = total of -$0.80/lb

Cost of Processing and Packaging /lb: (industry estimate as of 9/2025**) = total of -$1.50/lb**

Therefore, Net Income of production/lb = -$0.80, + -$1.50, plus sale price @ $6.00 = $3.70/lb.

Net Income from 1,000,000 lbs/year of tilapia sold @ $3.70 = US $3,700,000

Vegetable Income: high quality allows a premium price = total of $4.0/lb
Less, the cost of production: = total of - $0.30/lb.
Therefore, Net Income of production/lb = -$0.30, plus sale price @ $4.00 = $3.70/lb.
Net Income from 5,000,000 lbs/year of vegetable sold @ $3.70 = US $18,500,000

Grand Total Net Income is $3,700,000 + $18,500,000 = $22,200,000 per year 2, reoccurring

Thus, ROI Investment $20,000,000, Net Income $22,200,000, ROI 22.2/20 x 100 = 111% reoccurring

Project Construction Timeline

The timeline for the development of this project includes:

- **Stage 1:** Proposal review technology for the opportunity, **complete invoice payment**, **to open Contract Negotiation to form a joint venture in building and transferring the technology.** (30 days)

- **Stage 2: Contract Negotiations**, for technology details, site conditions, alternatives, and the species of choice, and its volume you wish to grow. Keeping in mind that greater volumes reduce the unit cost, and also considering the feed type to match the species and its ongrowing volume. Once the growing species are determined, the overall layout of the feed and species tanks can be designed along with the hatchery and processing systems to **establish a budget estimate for the complete system**. This budget will be **the basis of the Contract to establish the first progress monthly payment of 10%**. (1-2 months)

- **Stage 3: Contract Completion:** Given that this technology is from Divine Order, the promotion of this unique project will not be quietened by its isolation. Therefore, as part of the Contract Negotiations FST intends to help leverage the opportunities uniquely available, with extensions which will be added to this budget, such as training facilities, a showroom for sales, accommodations, restaurant/food court, tourism showcasing and tasting, **executive tours including accommodation**, and **conference center**, including Client preferences will **Complete the Contract and Budget for this Entire Project**. (2-5 months)

- **Stage 4: Project Outline Building Plans:** The first section of this project will be to set up the field crop growing area where fish are a choice of species to be grown. Depending on the volume of species to be grown, the area and volume of growing tanks will determine the overall size of the complex; however, the focus on 10% of the total will be used to establish a stable system that will serve the purpose until the balance of the system is built. (4 -6 months)

- **Stage 5: Building Under Construction:** the hatchery and broodstock, built 10% of the hatchery system. The full-size hatchery building 100% complete. Start hatchery growing and recycling system with complete water control. Finish hatchery 100%. (4-10 months)

- **Stage 6: Propagation & Plantation:** establish juvenile feeding systems, start ongrowing species, and build out ongrowing tanks. (8-12 months)

- **Stage 7: Fully Operational System:** Fully deployed species and feed growing systems (12-18 months)

Conclusion and Call to Action

This proposal represents the first-ever opportunity to lead a paradigm shift from toxic mono-aquaculture to the revolutionary multi-culture, disruptive technology, making current food production redundant.

With **innovations beyond** all known technology, **[Liberia] is p**oised to be the flagship of the twenty-first century and become the **global leader,** introducing the **new dawn *in healthy food production*** by **restoring ravaged ecosystems and depleted seafood and freshwater resources**, **with zero-discharge farming operations and reseeding of natural environments**. But that's not all, as **this technology** also **provides the new seed stock for the abundant and continued harvest for mass food production**.

FST thanks you for this opportunity to share our unique technology so that we may progress to the next step of Contract Negotiations, to reach mutually beneficial terms and conditions for both parties, while minimizing risk and maximizing benefits.

FST appreciates your consideration and looks forward to developing our relationship to make food abundance a reality. Please do not hesitate to contact me if you have any questions; Phone 931 251 2442

Sincerely

Quentin koromete

Quentin Koromete: Contracts Engineer and Inventor.
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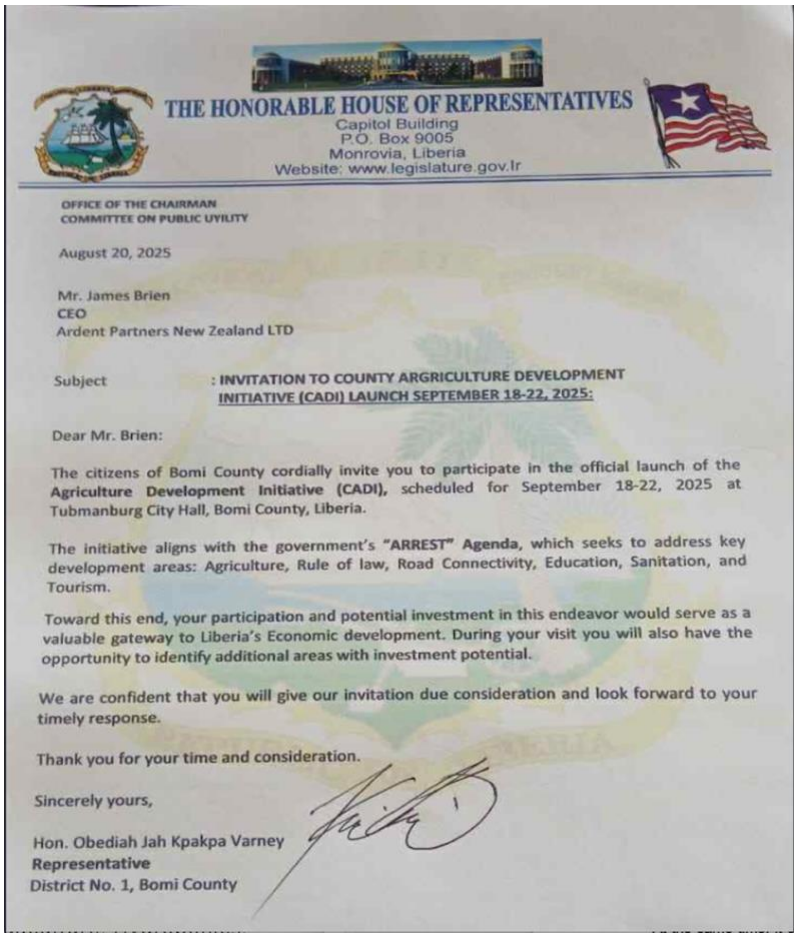
The letter below from the **Liberian Government Chairman of Public Utilities** is the official invitation to the **Agriculture Development Initiative**, scheduled for September 18-22, 2025, at City Hall, Bomi County. It is the result of 5 years in the making, starting with a Zoom call on December 31, 2020. FST promised the Bomi Chiefs one of FST's largest fish and vegetable growing systems to be deployed directly in the village to halt starvation and teach them to feed themselves. Paster Cutter from Georgia was communicating and visiting regularly; however, he passed away in December 2023. Since then, FST's Chief Financial Officer, **James Brien**, named in the letter, has set up this plan to secure funding using their collateral, and this letter confirms the result. **The background is detailed in the eBook Chapter 5, Joint Venture, with Team Cutter Enterprise, Liberia.**



THE HONORABLE HOUSE OF REPRESENTATIVES
Capitol Building
P.O. Box 9005
Monrovia, Liberia
Website: www.legislature.gov.lr

OFFICE OF THE CHAIRMAN
COMMITTEE ON PUBLIC UYILITY

August 20, 2025

Mr. James Brien
CEO
Ardent Partners New Zealand LTD

Subject : **INVITATION TO COUNTY ARGRICULTURE DEVELOPMENT INITIATIVE (CADI) LAUNCH SEPTEMBER 18-22, 2025:**

Dear Mr. Brien:

The citizens of Bomi County cordially invite you to participate in the official launch of the **Agriculture Development Initiative (CADI),** scheduled for September 18-22, 2025 at Tubmanburg City Hall, Bomi County, Liberia.

The initiative aligns with the government's **"ARREST" Agenda,** which seeks to address key development areas: Agriculture, Rule of law, Road Connectivity, Education, Sanitation, and Tourism.

Toward this end, your participation and potential investment in this endeavor would serve as a valuable gateway to Liberia's Economic development. During your visit you will also have the opportunity to identify additional areas with investment potential.

We are confident that you will give our invitation due consideration and look forward to your timely response.

Thank you for your time and consideration.

Sincerely yours,

Hon. Obediah Jah Kpakpa Varney
Representative
District No. 1, Bomi County

12-year journey to harvest kaimoana finally pays off

Quentin Goldsmith's vision for the future of aquaculture sits in an old chicken hatchery nestled in Gisborne.

Inside the insulated two-storey shed, at the rear of his 1ha section is a homemade assembly of bath tubs, aquarium pumps, pipes and second-hand air conditioning units.

While the set up looks primitive, it's the secret inner 5000 litre water re-circulating system, that he began experimenting with nine years ago, which is the key to the unit being able to harvest kaimoana.

"The plan for my system is to set up a pilot or a window to show people what is possible.

"The long term plan is to set up marine farms along the coast," he says.

MFish granted Quentin a fresh water farming licence to harvest pāua, crayfish, snapper, kahawai, oysters and kina last October.

The consent is the culmination of a 12-year-journey of highs and lows for the 42-year-old civil engineer, which began after attending a pāua spawning conference in 1988.

"I could see that the future was in aquaculture and I needed to skill myself up in that area so that I would be in the front seat when people finally realised it."

After 10 years working as a civil engineer he left the Raglan County Council in 1989 and began researching aquaculture.

He later went up north to work with his mother Rona's Ngāpuhi tribe, who were interested in developing an aquaculture farm on Stephenson Island, north of the Cavilli Islands.

The Island, formerly owned by the Department of Lands and Survey, was returned to Māori by the Crown. However, after Quentin developed a plan to start a marine farm - the idea was mothballed.

Strapped for cash, he took up another council job, this time with the Kaipara District Council. But he still kept on toying with his water recirculating system, which he now believes will enable him to spawn pāua in their off-season.

In 1994 he returned to his Ngāti Porou roots and took up a job as roading inspector for the Gisborne District Council and bought the section where he has built his new system.

Two years ago Quentin became the first Te Ohu Kai Moana student to be funded to study towards a certificate in Aquaculture from Deakin University in Australia.

"I thought I needed to improve my technical information in some areas," he says. "I picked Deakin University because I could do it by correspondence."

Quentin received $2000 towards his course costs and has opened the doorway for other Māori to study via correspondence and follow in his footsteps.

It's been a long and sometimes lonely path for Quentin to trek as he's invested more than $30,000 of his own money and all his spare time.

So when Quentin heard Te Ohu Kai Moana Chairperson, Shane Jones, talking about the commission's commitment to investing in aquaculture, at the TOKM Careers in Fishing Conference, he was smiling from ear to ear.

▲ *Quentin Goldsmith..."I could see that the future was in aquaculture and I needed to skill myself up in that area ."*

Quentin says the mindset of Māori fishermen trying to secure quota and buy big boats to fish must change.

"They must realise that there is only one way to catch millions of tonnes of fish and that's to farm it," he says. "As long as they are still buying boats to chase fish and are set in that way we aren't going to go anywhere – we are going to be fighting over the last snapper."

Quentin plans to start growing 150 legal size South Island pāua, which his neighbour and Te Kupenga director Stan Pardoe has sourced. He's also keen to evolve into farming pāua pearls.

He says the next step is using the system to harvest seafood all year round and then start marine farms along New Zealand shores.