सत्यमेव जयते

ARK

CIBA

भा कृ अनु प - केंद्रीय खारा जलजीव पालन अनुसंधान संस्थान
ICAR-CENTRAL INSTITUTE OF BRACKISHWATER AQUACULTURE
(ISO 9001:2008)

भाकृअनुप
ICAR

SUPER-INTENSIVE PRECISION AND NATURAL SHRIMP FARMING (SIPNSF)

Smart Shrimp Farming – The Future of Aquaculture

By Ark Aquatech

+ 91 9063289228 , +91 7799399555

admin@arkaquatech.com

www.arkaquatech.com

Plot No 12 , Near Apiic , Autonagar 4th Line , Mangalagiri,
Guntur , Andhra Pradesh ,Pin : 522503

LICENSED TECHNOLOGY PARTNER OF ICAR-CIBA

About SIPNSF Technology

SIPNSF Technology (Super-Intensive Precision & Natural Shrimp Farming) is a modern, high-tech shrimp farming system developed in India-mainly by the ICAR–Central Institute of Brackishwater Aquaculture (CIBA) . It aims to make shrimp farming more productive, sustainable, and biosecure.

80–100 tons/year from 0.5 hectare under intensive farming; T&Cs apply.

SIPNSF is an advanced aquaculture model that combines:

- Super-intensive culture (very high stocking density)
- Precision farming techniques (scientific monitoring & control)
- Natural/eco-friendly principles (reduced chemicals, better sustainability)

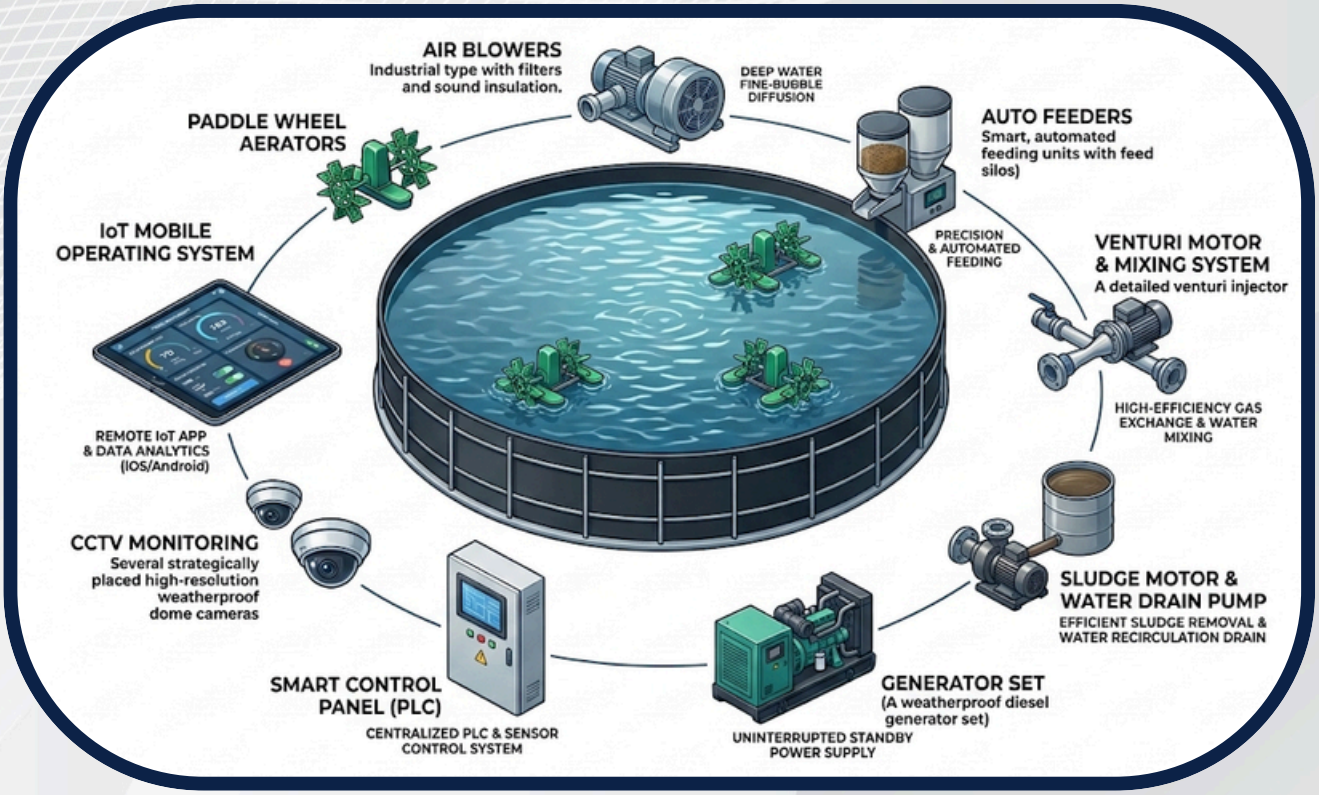
It is designed specifically for Indian conditions to increase shrimp yield while minimizing environmental impact.

DIFFERENCES BETWEEN TRADITIONAL FARMING & SIPNSF

SIPNSF		TRADITIONAL SHRIMP FARMING
Very high	STOCKING DENSITY	Low-medium
Minimal/controlled	WATER EXCHANGE	High
Lower (biosecure)	DISEASE RISK	High
High (precision monitoring)	TECHNOLOGY USE	Low
Reduced	ENVIRONMENTAL IMPACT	Often high
Very high	PRODUCTIVITY	Moderate

CORE TECHNOLOGY

Licensed Technology Partner
- Ark Aquatech

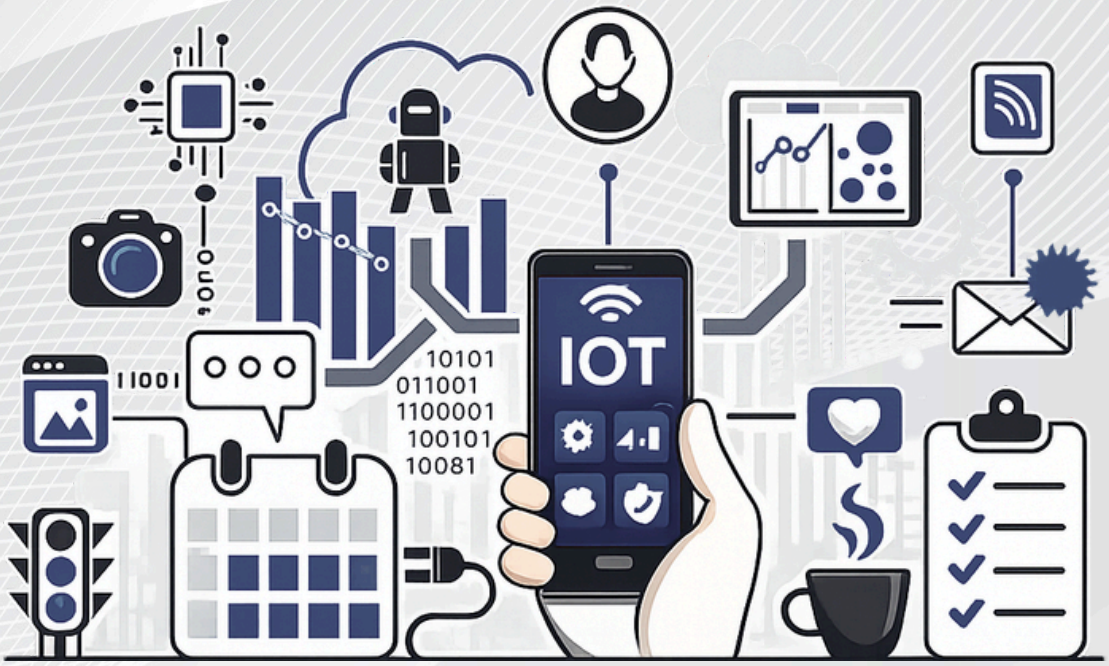


SIPNSF TECHNOLOGY

SIPNSF (Super Intensive Precision and Natural Shrimp Farming) is a high-tech aquaculture model designed for maximum productivity and biosecurity.

- Design: Uses HDPE circular tanks with a central drainage system for continuous sludge removal.
- Aeration: A 24/7 multi-stage oxygenation system using paddle wheels, Venturi motors, and deep-water air blowers.
- Automation: Smart PLC control panels manage auto-feeders and equipment to reduce waste and optimize growth.
- IoT & Security: Remote monitoring via a mobile OS for live data tracking and CCTV surveillance.
- Reliability: Integrated standby generators ensure uninterrupted life support during power outages.

Goal: Science-driven, high-density farming that achieves consistent, year-round harvests regardless of external conditions.



IoT TECHNOLOGY FOR SYSTEM MONITORING, ALERTS & OPERATING

(Web & Mobile Application Based)

Overview

IoT Technology provides a complete smart solution for real-time monitoring, instant alerts, and remote operation of aquaculture systems. It connects all equipment and sensors to a centralized platform accessible via mobile application and web dashboard, enabling full control from anywhere.

Key Benefits

- 24/7 monitoring & control
- Smart feeding automation
- Reduced manpower & operational cost
- Prevents losses with instant alerts
- Improves productivity & farm efficiency

Core Functions

Real-Time Monitoring

- Continuous tracking of water quality parameters
- Live equipment status (ON/OFF, performance)
- Power supply and system health monitoring

Smart Alerts System

- Oxygen (DO) drop alert
- Power failure / voltage fluctuation alert
- Equipment fault / dry run alert
- Water level high/low alert
- Low feed level alert
- Feeding cycle completion alert

Remote Operating (Control)

- Start/Stop pumps, aerators, blowers
- Control Auto Feeder operations remotely
- Schedule feeding timings & quantity
- Manual override via mobile/web
- Centralized control of entire farm

Automated Feeding System

- Scheduled and uniform feed distribution
- Adjustable feed quantity and timing
- Reduces feed wastage
- Improves Feed Conversion Ratio (FCR)

PRODUCTION ADVANTAGES

HDPE liner tank farming enables high-performance aquaculture by creating a controlled and efficient environment that maximizes productivity. With improved Feed Conversion Ratio (FCR) and auto feeder integration, feed is utilized effectively with almost zero wastage, reducing operational costs. The system supports high stocking density, allowing more production in limited space, while partial harvesting ensures continuous income without disturbing the entire crop. Due to optimized conditions, farmers benefit from faster crop cycles, enabling multiple harvests in a year. Additionally, the controlled setup ensures stable water quality, significantly reducing stress and maintaining ideal growth conditions. This leads to lower infection risks, better disease control, and higher survival rates, ultimately resulting in increased yield and profitability.

HARVEST ADVANTAGES

HDPE liner tanks enable easy and quick harvesting with less labor. Partial harvesting is possible, allowing continuous income without disturbing the full stock. The clean environment ensures better quality and uniform size, while fast drainage helps in quicker turnaround for the next cycle, improving overall efficiency and profit.

Financial Gain

Lower operational cost

Faster returns

Predictable production

SIPNSF technology helps reduce operational costs by using smart systems and efficient resource management. It enables faster crop growth, giving quicker returns to farmers. With a controlled environment and advanced monitoring, it ensures predictable production, resulting in stable and reliable profits.

ARK AQUATECH

Smart Aquaculture. Suatainable Future.

Advanced aquaculture solutions powered by technology, built for reliability, and supported end-to-end across India.

Licensed SIPNSF Technology

Officially licensed technology implementation for high-performance and sustainable shrimp farming systems.

End-to-End Project Support

Complete solutions from design to installation and commissioning — we manage every step seamlessly.

Training & Support

Comprehensive hands-on training and continuous technical support to ensure smooth and efficient farm operations.

PAN India Deployment

Advanced aquaculture solutions delivered and implemented anywhere across India with expert support.

OUR CORE EXPERTISE

SIPNSF Systems

Super Intensive Shrimp Farming systems designed for high productivity and maximum yield.

HDPE Grow-out Tanks

Durable circular tanks engineered for optimal performance and long-term use.

RAS & Biofloc Systems

Advanced biosecure systems that improve water quality and enhance farm efficiency.

IoT Smart Control

Real-time monitoring and automation for smart, data-driven farm management.

Aeration & Oxygen Management

Efficient systems to maintain stable oxygen levels and a healthy pond environment.

Project Planning & Execution

Expert planning and seamless execution from concept to completion.

Key Offerings

Turnkey Project Execution

- Site assessment & feasibility
- Design & engineering
- Installation & commissioning

Smart Aquaculture Systems

- IoT-based automation
- Real-time monitoring & control
- Mobile-based farm management

Operation & Technical Support

- Training for farm operators
- Culture management guidance
- Continuous technical assistance

PAN India Presence — Delivering solutions, empowering aquaculture, and driving the future.

Transform your farm into a smart, efficient, and profitable aquaculture system - Partner with ARK AQUATECH.

+91 9063289228

admin@arkaquatech.com

www.arkaquatech.com