

HIGH HEALTH AQUACULTURE INC.

Kona, Hawaii USA

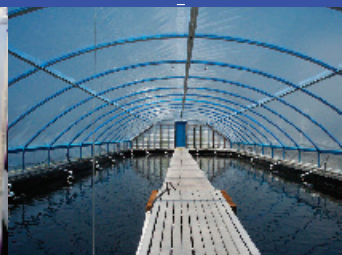
www.hihealthshrimp.com



Thailand's largest supplier of SPF *P. vannamei* Broodstock



- Best Shipping Survival
- Award Winning Research
- World Class Breeding
- 4 Species of SPF Shrimp
- 12+ Years in Industry



a Passion for Shrimp

Welcome to High Health Aquaculture

A message from High Health:

Greetings and welcome to High Health Aquaculture. In the following pages, you will see what makes HHA the industry leader in shrimp breeding and broodstock production. Our commitment to Quality is led by the Principles of Science, Integrity and Results.

HHA has been awarded a number of highly competitive research grants by both the US Federal and Hawaii State Governments. Our technology is based on World Class research that has been closely reviewed by top research committees.

Committed to integrity in all aspects of our business, we only make promises we can deliver. We do more testing and publish more results than anyone in the industry. Our opinions, recommendations and actions are based on facts and analysis.



Keahole Point, Kona, Hawaii USA

Results matter the most. Anyone can make promises. Delivering great results is key to our long-term success. Our success and reputation is built on the results and success of our broodstock productivity in hatcheries and the results and success of PLs by farmers in grow out.

The domesticated shrimp industry has come a long way. HHA is proud to have made positive contributions to the industry and looks forward to continued innovation in the near future. It is a pleasure to serve the needs of the global shrimp industry.

Award Winning Research

Over the years, HHA has completed a number of research projects on a World Class level. HHA funds a majority of its R&D projects, but has also been awarded 9 US Federal SBIR grants and matching State of Hawaii SBIR grants totaling over one million dollars in government sponsored R&D funding.

Web link to Federal SBIR Program:
<http://www.csrees.usda.gov/funding/sbir/sbir.html>

Web link to Hawaii SBIR Program:
<http://www.htdc.org/sbir/>

Web link to HHA on Hawaii SBIR:
<http://www.htdc.org/sbir/success.asp>

Web links to SBIR Agencies

These Awards are highly competitive and much sought after. Only the best research projects are selected out of hundreds of applicants. HHA is the only shrimp breeding company to receive funding through these various programs.

- Development of SPF P. monodon stock
- Hybridization of Marine Shrimp
- Development of Taura Virus Resistance
- Development of White Spot Resistance
- Development of Improved Performance
- Development of Polyploid Technology
- Development of Low Salinity Culture Line

SBIR Research Project Objectives

Oversight and review by SBIR Agencies assures that the highest level of science is practiced and results are interpreted in an unbiased manner.

- Packing & Shipping Technology
- Maturation Diets and Systems
- Greenhouse Raceway Systems
- Artificial Insemination Techniques
- Improved Growth for Higher Density
- Round Pond Systems
- Site Specific Breeding

Other Research Projects



HHA Breeding Center & Program

State of the Art Breeding Center

HHA's new Breeding Center is designed to run sophisticated breeding programs. Equipped with the latest tank, photo period and recirculating filtration systems, HHA is capable of producing 24 distinct families per run.



High Tech Breeding Center

HHA's Breeding Center produces broodstock throughout the year, enabling year round availability. Our production is carefully timed to meet peak demand during the critical months, the high seasons for farm pond stocking.



Nauplii Spawning Tank

The ability to internally produce large quantities of SPF juveniles allows HHA to select only the fastest growing and healthiest for broodstock production. Our customers receive the very best of each family we produce by controlling quality throughout the entire production process.



Larval Rearing System

Highest Shipping Survival in the Industry

Being in the business for more than 12 years, HHA has shipped thousands of broodstock to all parts of the world. Our shipping experience and numerous packing experiments improving shipping techniques has resulted in HHA's highly successful and reliable shipping results.



Shipment to Thailand 2005

Our customers consistently report low mortality of less than 5%. Many HHA customers report outstanding results with mortality less than 2%. HHA provides recommended acclimation procedures for a smooth transfer on arrival.

- Thailand
- Indonesia
- China
- Vietnam
- Malaysia
- Singapore
- Taiwan
- Korea
- India
- United States
- New Caledonia
- Dominican Republic
- Japan
- Brunei
- Costa Rica
- Mexico
- Eritria
- Germany
- Jamaica
- Columbia
- Ecuador
- Brazil
- Belize

Countries shipped to by HHA

HHA conditions the broodstock 7 days prior to shipping.

During this period we prepare the broodstock for the long transit and perform additional quality control measures. Our packing methods include using proprietary techniques and carefully controlled water treatment. In shipments up to 1000 broodstock and transit times as long as 48 hours, we consistently achieve mortality within our 5% shipping allowance. With shipping rates rising, high survival reduces hatchery costs and saves valuable time.

SPF Certification & Virus Challenge Program

Going Beyond the Competition

HHA's Disease Management Program is the most comprehensive in the industry by performing more diagnostics than is required for Health Certificates. No disease organisms have ever been detected at our facilities.

- White Spot Syndrome Virus (WSSV)
- Taura Syndrome Virus (TSV)
- Yellow Head Virus (YHV)
- IHHN Virus (IHNV)
- Infectious Myonecrosis Virus (IMNV)
- MBV
- BP/MBV
- HPV
- NHP
- Gregarines
- Microsporidians
- Haplosporidians

Screened & Certified SPF

All HHA stocks are screened by histology and PCR at the University of Arizona Aquaculture Pathology Laboratory (APL). APL also conducts annual Taura Virus challenges for HHA to verify resistance of our TVR lines.



HHA operates its own independent quarantine facility to ensure that newly acquired genetics are truly SPF before introduction to our Breeding Center. The ability to independently source for genetics has allowed HHA to establish 4 species of SPF stock and create a diverse gene pool.



The Most Diverse Collection of SPF Species in the World

HHA is the only company in the world to maintain SPF stocks of all 4 major domesticated shrimp species.



HHA vannamei-Pacific White

HHA's SPF TVR vannamei accounts for more than 50% of broodstock imports to Thailand. HHA has selected for resistance to Taura and for fast growth through 8 generations and has now hybrid crossed these lines for growth to produce GxTVR.



HHA monodon-Black Tiger

HHA's monodon stock is now in its 8th generation of domestication. Recently hybrid crossed between Australian and Red Sea origins, continued improvement in growth rates are being achieved. Available for commercial scale production later this year.



HHA stylirostris-Pacific Blue

HHA recently produced Founding Stock for New Caledonia's Shrimp Association. Over a multi-year program, HHA successfully produced 12 distinct families for the Association and maintains these lines at our Kona facilities as back-up genetics.



HHA japonicus-Japanese Kuruma

The most valuable marine shrimp, japonicus commands high market prices in the Tokyo market. Preferred for its sweet meat and colorful banding, Kuruma ebi as it is known in Japan is highly desired when freshly prepared using "Tempura" style.

SPF Hybrid Crossed for Fast Growth and Taura Virus Resistance

After 8 generations of selective breeding for both Fast Growth and Taura Virus Resistance, our new GxTVR line shares the same growth characteristics of our fastest growing SPF lines and resistance to Taura Virus.



Mated GxTVR Females



Hybrid Crossed GxTVR

Despite doubts from the shrimp research community, HHA began its breeding program for Taura Virus resistance over 8 years ago. The success of HHA and subsequent work by the research community has led to an acceptance of the TVR concept.

Shortly after TVR was established, HHA began a selective breeding program to improve growth rates in our TVR lines. The research community had doubts and stated that there may be a negative correlation between resistance and growth. 8 generations later, HHA has produced a fast growing and Taura Virus resistant stock. The research community has recently agreed that faster growth in Taura resistant strains could be achieved through breeding.

HHA is consistently in the lead of shrimp breeding research and quickly brings new products to the market to benefit the shrimp farming industry.

Ordering Info

Pricing: HHA Broodstock prices depend on current market demand for each species. We offer discounts for orders of 1,000 or more and for our loyal customers, who order more than one shipment per year. Please contact HHA for current pricing.

Shipping Documents: HHA provides the following documents with each shipment.

- Health Certificate
- Invoice
- Certificate of Origin
- Packing List
- Air Waybill

Health Certificates are issued by the Hawaii State Agriculture Department Aquaculture Development Program (ADP).

HHA has worked closely with ADP to provide additional documents to comply with import regulations at countries of destination. Please contact HHA for further details.

Shipping Allowance: HHA provides 5% extra broodstock free of charge to compensate for shipping mortalities. HHA has a strong track record of successful shipping results with low mortality rates

Terms: HHA requires full payment at least one week in advance of shipping date. Once payment is confirmed by our bank, HHA will forward shipping documents.

Reservations: HHA does not require advance deposits. Requests should be made at least 2 weeks in advance of shipping so we may process shipping documents and prepare our broodstock.

Contact HHA: For orders, please contact Mr. Jason.

Jason617@msn.com

Cell: +1-808-557-8080

Fax: +1-808-443-0231

A Focus on SPF Shrimp

Since graduating with a Ph.D. in Zoology from the University of Hawaii, Dr. Jim has spent his entire professional career in the aquaculture industry.

From 1984-1992, Dr. Jim was appointed founding Principal Investigator of the USDA-funded U.S. Marine Shrimp Farming Program (USMSFP). Under Dr. Jim's leadership at the Oceanic Institute (O.I.), the SPF concept and breeding program was developed.

Confident that the SPF concept would greatly impact the domesticated shrimp farming industry, Dr. Jim left O.I. to create the world's first commercial SPF shrimp breeding and broodstock production company, High Health Aquaculture.

Building upon his experience at O.I., Dr. Jim had the vision and expertise to develop 4 species of SPF shrimp broodstock.



James A. Wyban, Ph.D.

In addition to implementing a successful breeding and production program at HHA, Dr. Jim has also designed commercial shrimp hatcheries and operations in other countries.

Nothing is more gratifying to Dr. Jim than seeing his work benefit the global shrimp industry. With exciting events on the horizon, Dr. Jim looks forward to continued progress and success.

**High Health Aquaculture Recommends
Thai Union Feed Mill Growout Feeds**

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