MPEDA Newsletter

VOL. XI NO. 5 AUGUST 2023

Novel Alternatives to Tackle Disease in Aquaculture

Processing Industry Raw Material as Source of Bioactive Peptides

MPEDA Virtual Buyer Seller Meet & Business Meet

Marine Landings Report - June 2023

www.mpeda.gov.in

/MPEDAIndia /MPEDACOCHIN /mpedaindia /mpedaofficial /@mpeda

CPF (INDIA) PRIVATE LIMITED

CPF 3 BEST

BEST SOLUTION

BEST SERVICE

BEST QUALITY

APPROACH FOR AQUACULTURE

CPF Turbo SEED

INNOVATIVE • PROFITABLE • SUSTAINABLE

CPF SMART FARM PLUS

CPF FISH SMART

PREMIUM SHRIMP FEED

PREMIUM FISH FEED

PREMIUM PROBIOTIC PRODUCTS

PREMIUM MINERAL PRODUCTS

Contact Us at: +91 98401 31913

Email Us at: customercare@cp-india.com

CONTENTS

PERFECTED
TO PERFORM

www.cftech.in

CF TECH
PERFECTED TO PERFORM

MULTIJET IQF FREEZER

SEAFOOD

MEAT & POULTRY

VEGETABLES

READY TO EAT

Cochin Food Tech Pvt. Ltd.
5/134 A, Udayamperoor P.O.,
Ernakulam, Kerala 682307, India
T: +91 7593810095 E: sales@cftech.in

CERTIFIED ISO 9001:2015 COMPANY

/cochinfoodtech

+91 7593810095

www.cftech.in

On the Platter

Mr. Dodda Venkata Swamy
Chairman

Dear friends,

As a follow-up to the Chinthan Shivir held in Goa last month on enhancing exports to ₹ 1 lakh Crore, MPEDA organised the meeting of sub-committees on Aquaculture regulation and traceability as well as that looks after the SPS and quality assurance. Actions based on the suggestions that emerged in the meeting have already been initiated with the help of state Governments.

MPEDA has already prepared state action plans to enhance the production and export of marine products by identifying the strength of each state and the gaps. These plans were sent to states for their consideration as well. Further, I called upon Mr. Gopal Krishna Dwivedi IAS, Special Chief Secretary to Govt. (FAC), Animal Husbandry, Dairy Development & Fisheries, Govt. of Andhra Pradesh at Vijayawada and discussed the action plan for Andhra Pradesh to enhance aquaculture production from the state and its contribution to exports. I also met Mr. Mangat Ram Sharma IAS, Additional Chief Secretary, Department of Animal Husbandry, Dairying, Fisheries and Fishermen Welfare, Govt of Tamil Nadu. I discussed the action plan for the state and areas of collaboration between MPEDA and the State Govt. for the marine products export promotion from the state.

MPEDA was also honoured by the visit of Mr. Shambhulingappa Hakki IFS, Consul General of India, Guangzhou, People's Republic of China, who had interacted with MPEDA officials and provided valuable insights into the Chinese market.

While our Black Tiger enjoyed an exemption from import checking for antibiotic residue in the Japanese market, the detection of Malachite Green, a dye in a consignment exported by one of our exporters to Japan in Black Tiger came as a bolt in the blue. After this, Japan sprang to action and imposed a 30% enhanced check on shrimp consignments from India for Malachite Green. The compound which is used as a dyestuff also has potential antimicrobial activity. Most of the developed markets regard it as a food safety risk owing to its carcinogenic and probable mutagenic properties.

As a part of its annual Seafood HACCP training calendar, MPEDA organised a 4 – day' Seafood HACCP training programme in Veraval, which was attended by 27 technical personnel.

MPEDA has organised Virtual Buyer Seller Meets with buyers from Japan, Singapore and Belgium. The VBSM with the Japanese buyer was exclusively on technical collaboration for producing and exporting Nobashi ebi (Stretched shrimp) from India.

MPEDA has also geared up to participate in the 24th Japan International Seafood Show to be held from 24-26 August 2023 at Tokyo Big Sight. The Indian Pavilion there will have a participation of 12 exporters along with MPEDA.

The 59th meeting of the Technical Committee of MPEDA was organised in virtual mode, wherein the amendments to registration were deliberated based on the decisions taken in the 144th meeting of the Authority.

Wishing everyone a Happy Independence Day!!

Thank you,

MPEDA Newsletter
VOL.XI / NO. 05 / AUGUST 2023

EDITORIAL SUPPORT
Bworld Corporate Solutions Pvt Ltd
166, Jawahar Nagar, Kadavanthra
Kochi, Kerala, India 682 020
Phone: 0484 2206666
www.bworld.in, life@bworld.in

LAYOUT
Mr. Bijo Francis John

Printed and Published by
Mr. K. S. Pradeep IFS, Secretary
On behalf of The Marine Products Export Development Authority
(Ministry of Commerce & Industry, Govt. of India)
MPEDA House, Panampilly Avenue
Kochi, Kerala - 682 036, Tel: +91 2311901

www.mpeda.gov.in
support@mpeda.gov.in

Published by
MPEDA House
Panampilly Avenue
Kochi, Kerala - 682 036

Printed at
Print Express
44/1469A, Asoka Road
Kaloor, Kochi, Kerala - 682 017

STRATUM INNOVATIVES

TRULY INNOVATIVE

WE HAVE A RELIABLE SOLUTION FOR YOU!

Condensate Removal
& Prossesing Space Cooling System.

WANT TO BE CONDENSATE FREE ?

BEST SUITED TO FOOD PROCESSING INDUSTRY

BEFORE



CRS

AFTER



- PROVEN TECHNOLOGY WHICH AVOIDS SETLING OF CONDENSED WATER DROPLETS ON THE CEILING.
- PROVIDES BETTER COMFORT TOR THE OCCUPANTS.
- VERY EFFECTIVE SYSTEM.
- LOW MAINTENANCE.
- HASSLE-FREE OPERATION.
- ENERGY EFFICIENT.

#343, 9TH MAIN, 4TH CROSS, VYALIKAVAL HBCS LAYOUT, NAGAWARA, BANGALORE, KARNATAKA-560 045

MOB: +91 9980088268, EMAIL ID: marketing@stratumpc.com, siva@stratumpc.com
WEBSITE: www.stratumpc.com

MPEDA organizes Virtual Buyer Seller Meet and Business Meet

Singapore

MPEDA organized a Virtual Buyer Seller Meet (VBSM) on 5th July 2023 with the support of Enterprise Singapore, a statutory board under the Ministry of Trade and Industry of the Government of Singapore. The meeting was attended by the following buyers from Singapore-

1. M/s Pacific Aquaculture represented by Mr. Hao Yang Teng (CEO)

2. M/s The Seafood Company represented by Mr. Kenneth (Purchaser)

3. M/s. CIC represented by Mr. Funhai (Purchaser).

The buyer's requirement is to export live Mud crab from India to Singapore. 6 Indian exporters participated in the meeting. The exporters presented their credentials to the buyers and also the sizes and quantity they can offer.

The meet was moderated by Mr. S. Asok Kumar, Deputy Director and Dr. V. N. Biju, Assistant Director, Market Promotion Section, MPEDA.

Mr. Anil Kumar P., Joint Director (Marketing) concluded the meeting by Q & A session with the buyers.

Business Meet

Embassy of India Brussels, in collaboration with the MPEDA, organized a Business Meet as the first session of the Virtual Buyer Seller Meet (VBSM), aiming to promote the export of Indian marine products to Belgium and Luxembourg. The event took place online on 14th July 2023.

The session commenced with welcoming remarks by N. Ashok Kumar, Adviser, Embassy of India Brussels. Dr. M. Karthikeyan, Director, MPEDA, presented valuable insights on the promotion of Indian marine product trade with Belgium, providing attendees with a comprehensive overview.

Mr. Ivan Bartolo, President of the Seafood Importers and Processors Alliance (SIPA), shared the information about the EU Market. Mr. Jagdish V. Fofandi, National President of the Seafood Exporters Association of India (SEAI), spoke on the trade issues with EU.

Mr. Jainendra Singh Kandhari, First Secretary (Trade), Embassy of India Brussels, highlighted the upcoming series of VBSM – one-to-one interactions between Belgium Importers and Indian exporters.

The Embassy also assured facilitation for the buyers attending WFI 2023, strengthening India's presence in the global food trade.

The Business Meet witnessed active participation, with 40 Indian exporters engaging in productive interactions with Mr. Ivan Bartolo, President of SIPA and Embassy. Mr. Anil Kumar P., Joint Director (Marketing), MPEDA extended the vote of thanks.

Indian seafood promotion week

Indian Seafood Promotion Week was successfully held at four Indian restaurants in Beijing - The Taj Pavilion, In Kitchen, Dastaan and Ganges from 30th June to 9th July 2023. These four restaurants are the most famous Indian restaurants in Beijing with a considerable number of Chinese people coming in to taste Indian cuisine.Indian ribbon fish, silver croaker, white shrimps (head off and shell on), pomfret and lobsters were procured from a Chinese importer of Indian seafood based in Qingdao, Shandong Province and provided to the restaurants which prepared seafood dishes to be served as complimentary dishes or free samples to their customers. Marine Products Export Development Authority (MPEDA) refrigerator magnets and canned tuna fish were also given to these restaurants to hand out as free gifts to their customers which participated in the event.

Indian seafood promotion week on Weibo

Total views: 34K
Total views of posts tagged: 16K

The Taj Pavilion

Address: 302, 3rd Floor, Lido Plaza, No. 6 Jiangtai Road

Review from customers:

"Just in time for the Indian seafood promotion week at the restaurant, we were presented Indian style fried hairtail, which is very delicious. The Indian hairtail is very soft and tender, crispy and delicious, it is great!"

"The banana leaf pomfret is really delicious and the recipe is also very unique. It is wrapped in fresh banana leaves and the entire pomfret is very large. It is rare to see such a large pomfret in China. The restaurant manager introduced that this is specially imported from India, which is super great"

In Kitchen

Address: 1st floor, No. 2 North Street, Sanlitun, Chaoyang district, Beijing reviews from customers:

"Today is my friend's birthday. I took them to have Indian food. The environment is very good, and Indian songs are playing on the TV. It's very nice. It's the first time I eat Indian food. The waiter recommended that there is a seafood event today, saying that the seafood is all imported from India. I wonder how it is possible, doesn't China have seafood? Then the manager came over and said that the seafood really came from India. It was provided by the Indian Embassy. These days, we are holding seafood promotion week activities. Then we ordered some seafood. We tasted it and found it delicious. The quality of the meat is very fresh. After the meal, the proprietress also gave us a watermelon fruit plate, I will come again next time"

"I came to In Kitchen with my friends for dinner today, just in time for the Seafood Promotion Week in the store. It is fresh and cheap. There are lobsters, prawns, and all kinds of fish. The ingredients are all imported from India. They are very fresh, and they are all made of curry. It has a special flavor, the shrimp is delicious, especially after tasting the lobster, it can be mixed with rice in soup, it is extremely delicious, friends who like to eat seafood can try it. Service is good also. I have eaten their curries before, and they are all delicious. I am never disappointed every time. I will try their other curries next time."

"Today, I specially tasted the curry lobster, which is a bit spicy, but it has a moderate degree of spiciness. The lobster is very fresh and tasty."

Dastaan

Address: 3rd Floor, No. 5 SOHO5 Shopping Mall, Sanlitun, No. 8 Workers' Stadium North Road, Chaoyang district, Beijing

Review from customers:

"I happened to catch up with the seafood festival jointly organized by the Indian embassy and restaurant. I have been to India and have also visited many Indian restaurants, but I really haven't had much seafood from Indian cuisine. I tried lobsters, crabs, and mussel. The lobster is made by Tandoori barbecue method, which is very delicious with Mint sauce. Curry crabs, unlike Thai curry crabs, Indian curry has a salty and spicy taste, slightly resembling spicy crabs. Curry mussel, the first time eating this method of mussel."






Ganges

Address: B1/F, Shimao Tianjie South Street, No.9 Guanghua Road, Chaoyang district, Beijing

Reviews from customers:

"I heard that our restaurant is hosting the "Indian Seafood Product Week" event, and the seafood is specially provided by the Indian Embassy from India. Today I came to taste spicy Shrimp balls.

The waiter said it was Indian shrimp, which was unexpectedly delicious. There were a lot of Shrimp balls, and each Shrimp balls was very large. It had a strong taste and a good taste! Thank you to the Indian Embassy! Thank you to Ganges Legend Indian Restaurant! Will come again"




CELEBRATING 25 YEARS OF EXCELLENCE

Thank you for 25 years of support

We express our heartfelt gratitude to our valued customers, aqua farmers, aqua trading agents, bankers, well-wishers and all our employees at Suryamitra.

Your unwavering support is a testament to the success of our 25-year journey.

OUR JOURNEY

1998 Surya Marine Exports which was established in year of

2002 1st Factory was established in Bhimavaram

2006 Suryamitra Exim Pvt Ltd was formed (SMEPL)

2011 Unit 2 with cooking line started & USA exports started

2020 Unit 2 expansion of 45,000 sft processing & cold storage

2023 **Silver Jubilee Celebrations** 14 Aug 2023

D.No. 2-137 & 138, Surya Food Park, Yanamadurru Village, Bhimavaram Mandal,
West Godavari, Andhra Pradesh 534239 | Phone: 9848523600, 9848511164

BRCGS Food Safety Sedex SMETA fssai FDA APPROVED BAP 4 Star Certified

Marine landings report June 2023

Dr. Afsal V. V. & Dr. Joice V. Thomas
MPEDA-NETFISH

NETFISH collects real time data on the daily marine landings from around 100 main fishing harbours and landing centres in India, to support the traceability and catch certification system. The information regarding the incoming fishing vessels and the species wise quantity of catch landed by each vessel are recorded by the Harbour Data Collectors, which is then made available on the MPEDA website. This report presents an overview of the trends observed in marine landings during the month of June 2023.

I. Observations on catch landings

During June 2023, data on daily marine catch landings was gathered from 64 landing sites across the 7 coastal states. The total recorded catch during this period amounted to 15,224.45 tons. This catch encompassed various categories, with Pelagic finfishes accounting for 8,222.24 tons (54 %), Demersal finfishes comprising 3,767.54 tons (25%), Crustaceans contributing 2,145.75 tons (14 %), and Molluscs making up 1,088.92 tons (7 %) (Fig. 1).

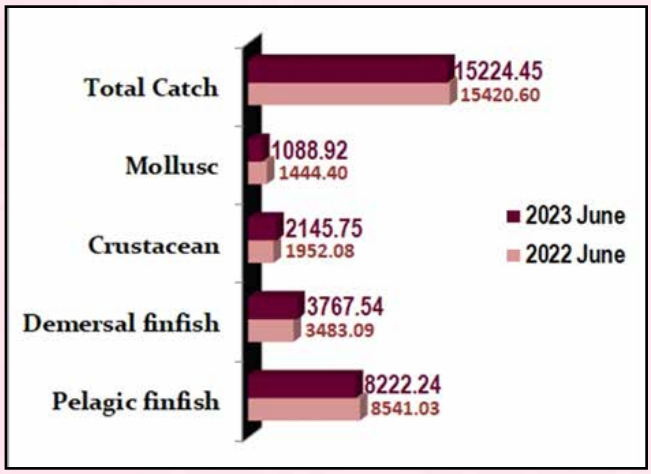


Fig.1: Catch composition of marine landings (in tons) (June 2022 & June 2023)

Throughout the month, a comprehensive tally of 214 species, including both marine finfishes and shellfishes, was documented. Among these, the five significant contributors were *Sardinella longiceps, Rastrelliger kanagurta, Stolephorus indicus, Nemipterus japonicus* and *Metapenaeus dobsoni* (Table 1).

Table 1: Top five species landed during June 2023

Sl. No:	Common name	Scientific name	Quantity (tons)
1	Indian oil sardine	*Sardinella longiceps*	1153.59
2	Indian mackerel	*Rastrelliger kanagurta*	1081.06
3	Indian anchovy	*Stolephorus indicus*	1016.27
4	Japanese threadfin bream	*Nemipterus japonicus*	535.56
5	*Poovalan* shrimp	*Metapenaeus dobsoni*	519.39

Upon analysing the landing data based on different groups, it was observed that Coastal shrimps (1,659.27 t), Anchovy (1,277.84 t), Sardine (1,153.59 t), Mackerel (1,153.03 t) and Croaker (1,024.16 t) emerged as the prominent items landed during the specified period (Fig 2). These five fishery items collectively accounted for approximately 41% of the total catch.

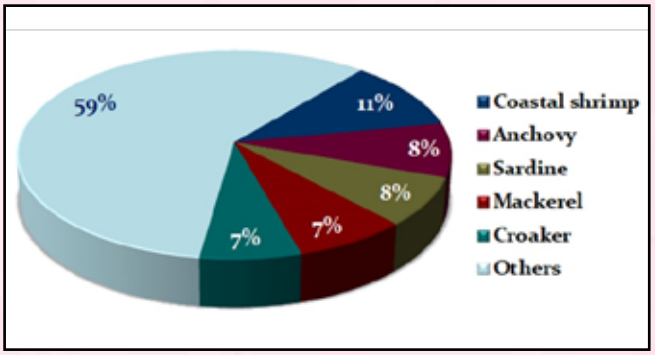


Fig. 2: Major five fishery items landed in June 2023

Within the category of Pelagic finfishes, the major items landed were Anchovies, Sardines, Mackerels and Tunas. Among the demersal finfishes, Croakers emerged as the major catch, followed by Threadfin breams. In the case of Crustaceans, Coastal shrimps

constituted over 77% of the total catch, with the dominant species being *Metapenaeus dobsoni, Poovalan* shrimp with 519.39 tons of landing. Cuttlefish and Squid were the main Molluscan resources landed during the month.

State-wise landings: Kerala recorded the highest landing, amounting to 5,514.92 tons, which accounted for 36% of the total catch. West Bengal followed with a share of 3,829.13 tons and then Tamil Nadu with 3,703.48 tons (refer to Fig. 3). Collectively, the East coast states contributed 63% of the total catch. Meager landing was reported from Karnataka & Maharashtra and no landing was reported from Goa & Gujarat, owing to fishing ban.

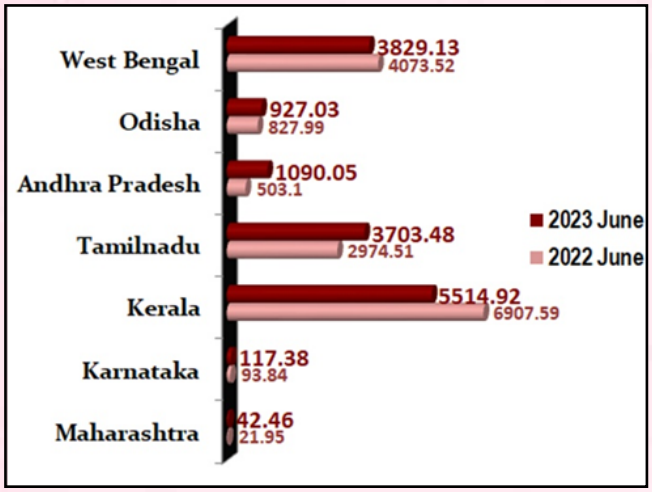


Fig. 3: State-wise marine landings (in tons) (June 2022 & June 2023)

Harbour-wise landings: The Deshapran harbour in West Bengal had recorded the maximum fish landings during the month. The major ten harbours in terms of total catch quantity landed are given in table 2.

Table 2: Top ten harbours based on catch landings

Sl.No:	Harbour	Quantity (tons)
1	Deshapran	1136.03
2	Sankarpur	1064.28
3	Thoppumpady	866.44
4	Munambam	854.61
5	Chennai	698.28
6	Beypore	572.30
7	Nagapattinam	502.39
8	Thengaipattinam	453.59
9	Mopla Bay	420.92
10	Visakhapatnam	419.46

2. Observations on boat arrivals

During the month of June, a total of 14,159 fishing vessels arrived at the 64 designated fish landing sites. Tamil Nadu witnessed the highest number of boat arrivals, followed by Kerala (Fig. 4). When considering specific harbours, Pazhayar in Tamil Nadu and Muthalapozhi in Kerala registered as the frontrunners with 545 and 538 boat arrivals respectively.

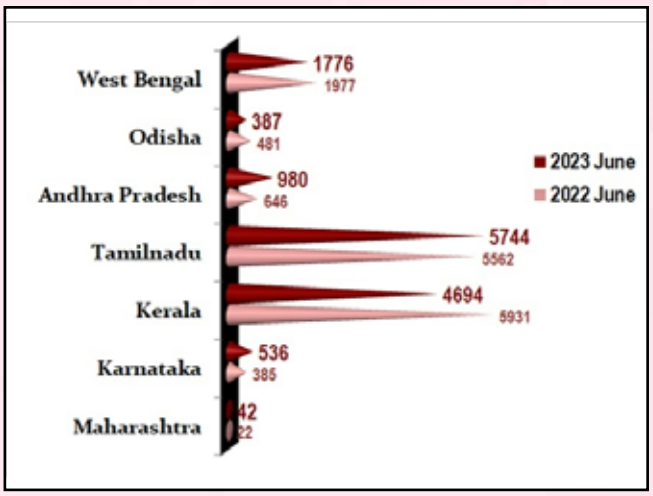


Fig. 4: State-wise boat arrivals (nos.) (June 2022 & June 2023)

Summary: In June 2023, the major fishing harbours and landing centres in India reported a total of 15,224.45 tons of marine landings and 14,159 boat arrivals. There was a significant decrease in the catch, amounting to approximately 32,000 tons, compared to May 2023.

Furthermore, there was a decrease of approximately 12,000 boat arrivals compared to the previous month. This decline in catch and boat arrivals can be attributed primarily to the fishing ban prevailed in East & West Coasts during the month.

Pelagic finfish resources remained as the primary contributor to the overall catch, with Indian Oil Sardine continued as the most landed species of the month. Kerala remained as the frontrunner in terms of total catch landed and whereas Tamil Nadu emerged as the lead state in terms of highest number of boat arrivals.

Among the various landing sites, Deshapran harbour attained the top position in terms of total catch landed, while Pazhayar harbour secured the first place in terms of the highest number of boat arrivals.

ULKA GROUP

ULKA SEAFOODS PVT. LTD | SHREE ULKA LLP

We would like to introduce our company Ulka Seafood's Pvt Ltd., is one of the leading Seafood's Processor and exporter from India with 6 Units, our processing head branch is situated at the MIDC, Industrial Area, Taloja, Navi Mumbai, Maharashtra, along with other 5 units in other parts of India.

Unit - 1 Approval No. 222
Orgao Marcela, Goa

Unit - 2 Approval No. 2619
Mumbai , Maharashtra

Unit - 3 Approval No. 1192
Mumbai , Maharashtra

Unit - 4 Approval No. 1161
Mumbai , Maharashtra

Unit - 5 Approval No. 1215
Mumbai , Maharashtra

Unit - 6 Approval No. 1584
Mangalore, Karnataka

- FROZEN SHRIMPS
- FROZEN SQUID
- FROZEN CUTTLEFISH
- SURIMI
- FISH OIL / FISH MEAL

Certified by :

mail@ulkaseafoods.in www.ulka.in +91-7045905303

Monthly outlook forecast report

Ritesh Victor – Co- founder & Country Head – Myforexeye Fintech Pvt. Ltd.
Email-id: sales@myforexeye.com

USD INR

Again, Rupee recovery was seen in this month as USDINR started the month at 82.62 making a monthly high of 82.68 in the initial trading sessions itself. Later, the rupee started to recover going below 82-levels in the middle of the month, also making a low of 81.88 and then finally ending the month at 82.05. After breaking the 82-level mark it stabilized in a small range of 81.90-82.05. We also had the interest rate meeting from US Fed as well as from RBI where RBI again paused as the inflation remains under the tolerance level. Similarly, the US Fed also went on to pause in this meeting but had signaled to continue its rate hiking path in the upcoming meeting.

After the FOMC meeting and also in an event held by the Spanish Central Bank, Powell indicated that the Fed is planning to increase the interest rates by 50bps more. Keeping in mind the Fed's hawkish stance to increase the interest rates in the future, it doesn't seem much of a downside for the USDINR pair so it can either continue to be stable or can again march towards the 82.70-80 levels. Key events for the upcoming months are Indian CPI (YoY) (Jun), Nonfarm Payrolls (Jun), US CPI (YoY) (Jun) & Fed Interest Rate Decision

The slumber in USDINR continues. The Chinese Yuan weakened 1.25% this week. Dollar index swayed between 102.32 and 103.54. Brent crude prices moved $4 per barrel. Indian equity indices surged to all-time highs. None of these had any impact on the Indian unit. USDINR barely moved beyond the 82 fulcrum with a weekly high low range of a paltry 13.25 paisa.

EURUSD

The EUR/USD pair displayed ups and downs but showed its upward movement through the month. The pair was trading around 1.0760 at the beginning of the month and was able to end above the 1.0900 level on the last trading day of the month. Before the ECB's interest rate decision, the pair remained pressured due to a strong US dollar, but soon registered a multi week high around 1.1012, following the interest rate hike by 25 bps by the ECB. The gains reversed in the third week of the month, around 1.0880, in response to the negative market sentiment due to poor macroeconomic data and investor concerns.

During the month, the EUR/USD showed strength, gaining over 200 pips. The pair briefly surpassed 1.1000 before retracing towards 1.0835 but managed to

close above 1.0900. Currently, the pair is range-bound without a clear direction. A break above 1.0960-70 could expose levels around 1.1000, followed by 1.1100. On the downside, bears may target 1.0870 in the near term as the 50 days moving average is located there, potentially extending towards the psychological level of 1.0700.

On the daily time frame momentum indicators show mixed signals, with the RSI and stochastic in a neutral zone, while the MACD giving bearish signals. Traders should closely monitor these levels to determine potential breakouts or further declines in the pair. Overall, the EUR/USD displayed strength but lacked sustained momentum, remaining within a familiar range.

GBPUSD

This month was a roller-coaster ride for Sterling. GBP gained rapidly against the USD in the starting, but from the middle of the month, it reversed its uptrend. The pound was able to gain, because of the disappointing release of the Initial Jobless Claims from the U.S. which came higher at 261K, the highest level since October 2021.

Due to dovish Fed views and a string of poor US macroeconomic data, the U.S. Treasury Bond lost recovery momentum, and pressure on the USD increased. As expected, the Fed kept the interest rates unchanged.

But BoE shocked everyone by increasing the interest rates by 50 bps, against a 25-bps hike expectation. This decision came out after the U.K. CPI came higher at 8.7% and the Core CPI was also higher at 7.1% annually, the highest rate since 1992.GBP gained to its 14-month high level of 1.2848.

Sterling reversed its gains towards the end of the month, as the dollar strengthened and reached the 103.54 level, due to the positive housing data of the U.S., Initial jobless claims, and hawkish comments from Fed officials. The pair closed at the 1.2599 level, slightly recovered after a disappointing release of the U.S. PCE price index.

USDJPY

It was a positive month for USDJPY, as it continued to gain for the third month in a row. The pair started the month by opening at 139.33 levels. The yen gained a little, after the first quarter GDP of Japan came higher at 0.7%, showing the resilient growth of Japan's economy. The Fed kept its interest rates unchanged as expected, but Powell stated further rate hikes will be there.

BoJ also continued with its loose monetary policy and kept the interest rates unchanged at -0.1%, as expected. The huge divergence between the BoJ and other major central banks' stances acted as a tailwind for the growth of the pair. Though the Finance Minister of Japan tried to prevent the downtrend of the Yen

against the dollar through verbal intervention. The intervention was successful but short-lived.

As BoJ's governor, reinstated the need to keep the ultra-loose monetary policy for a little longer although Tokyo's CPI came higher at 3.1%. USDJPY made a 7-month high of 145.07, a level last seen in November 2022. The pair ended the month by closing at the 144.28 level, the decline was due to the negative release of the U.S. PCE Price Index.

The USDJPY opened at 139.33 and showed a resistance around 139- 140 region for the first half of the month. The rally of the dollar against the yen has been continuous in the second half of the month, taking the pair to touch 145 on the last trading session of the month. Yen has almost depreciated by 3.50% against the dollar after the Fed indicates more future rate hikes while BoJ shows the same stance for changing its ultra-loose monetary policy.

It breaks monthly high and touches a 7-1/2 month high as well at 145.07 where we expect to see the BOJ intervention as previously seen at these levels. If possible to see a downtrend the pair can find its first support at 143.48 and second can be close to 141.86, but still looks a far target it looks BOJ if it does a strong intervention.

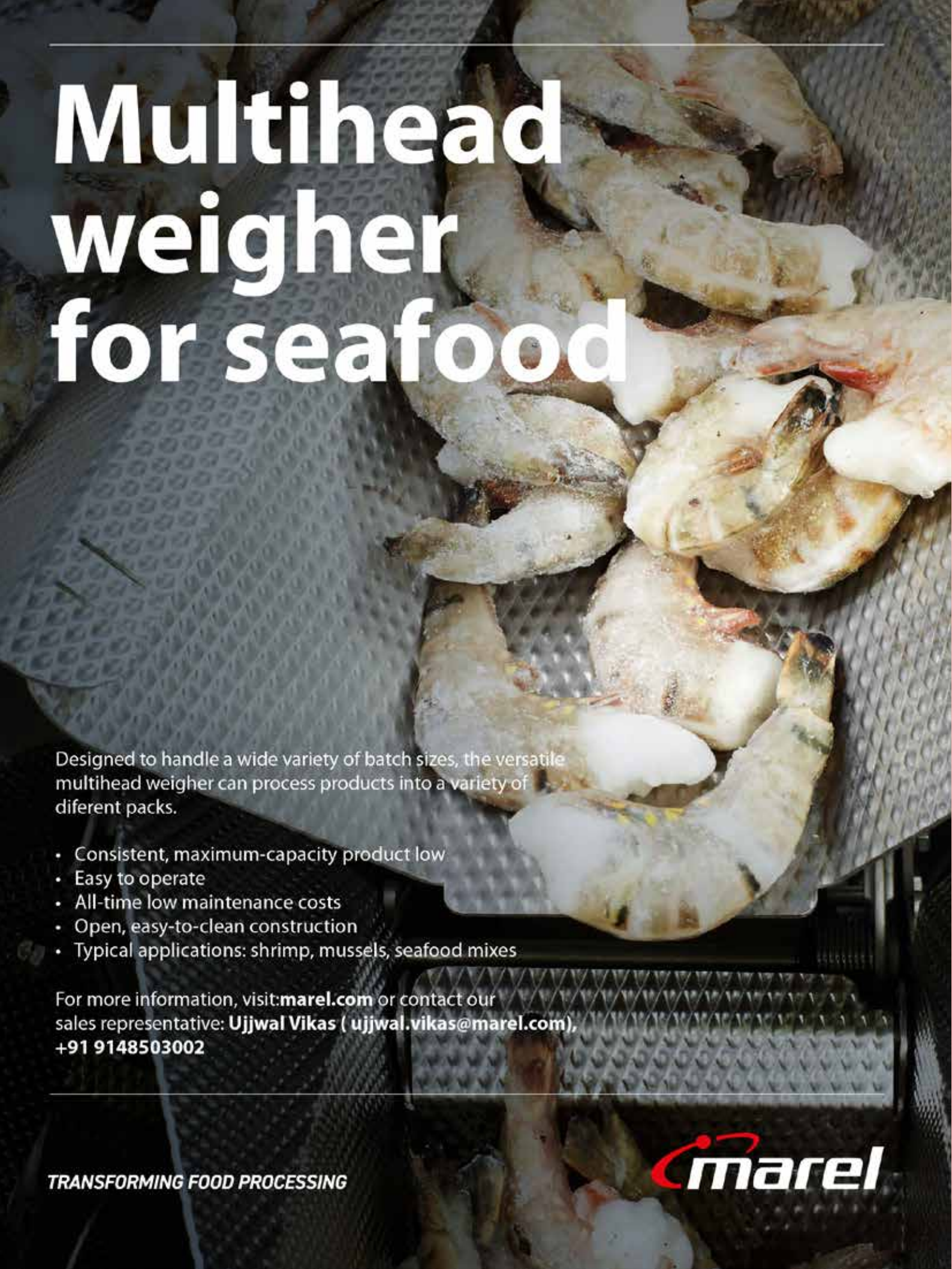
WORLD

June saw global equity markets trade on an even keel, mostly closing a shade higher than the previous month. Markets seem to be slowly taking into their stride the possibility of the Fed coming through with two 0.25% rate hikes this year and thereafter pausing for some time.

With the US economy doing well despite the hawkish Fed and the labour markets still showing very little signs of breaking down, the equity markets should remain steady even in July. Inflation is showing signs of cooling down slowly though it still remains much higher than the target levels of most central banks.

A bit of a negative for the markets, especially Asian markets, will be the disappointing economic recovery in China in the last two quarters. China is one of the major partners for most of the developed / devolving world and a slowdown there will have some impact on most of the world.

Equity markets however are slowly shifting the focus away from China and this month's moves might not be heavily impacted by what happens in China in the coming few weeks. Events in Russia will lead to a lower geopolitical threat from Russia and should be a positive for equity markets.



Multihead weigher for seafood

Designed to handle a wide variety of batch sizes, the versatile multihead weigher can process products into a variety of diferent packs.

- Consistent, maximum-capacity product low
- Easy to operate
- All-time low maintenance costs
- Open, easy-to-clean construction
- Typical applications: shrimp, mussels, seafood mixes

For more information, visit:**marel.com** or contact our sales representative: **Ujjwal Vikas (ujjwal.vikas@marel.com), +91 9148503002**

TRANSFORMING FOOD PROCESSING

marel

Secondary raw material from fish processing industries as a source of bioactive peptides

Dr. Girija Phadke-Behere[1], Dr. T. R. Gibinkumar[1] and Dr. M. Karthikeyan[2]
[1] MPEDA Regional Division Mumbai, Panvel, Maharashtra-, 410 206
[2]MPEDA, Head Office, Kochi, Kerala, India 682 036

Fish is eaten in both raw and processed forms, and is recognised as a source of high-quality protein. During fish processing, about 50 to 70 percent of the raw material is converted into trash, and can be considered as raw material for a variety of industries. Thus it is also known as secondary raw material, and include a variety of components, including fish endoskeleton, internal organs, skin, scales and heads (Chalamaiah *et. al.*, 2012).

Naturally sourced peptide-based nutraceutical drugs are one of the areas of interest to treat lifestyle related diseases, which are of great concern among the major group of global population. Naturally derived peptide-based drugs from aquatic resources can be considered as an alternative to synthetically derived drugs.

They contain a rich source of parent protein molecules having novel amino acid sequencing with unique bio functionalities on hydrolysis with proteases.

As fishery stocks are already being overexploited, discards from fish processing operations are regarded as secondary raw materials of interest and can be used for production of bioactive peptides. Such enzymatically derived and hydrolysed proteins possess various bioactive and functional properties making it suitable for use in nutraceutical formulations (Phadke *et. al.*, 2021).

Bioactive properties such as; antioxidative, antihypertensive, antimicrobial, anticarcinogenic, anti-coagulant, neuroprotective, wound healing, etc., vary depending on the hydrolysis degree, type and amount of enzyme used, amino acid sequence obtained, etc. (Phadke *et. al.*, 2016a; Phadke *et. al.*, 2016b, Ozogul *et. al.*, 2021).

Fish skin gelatin hydrolysates may be used effectively as antioxidant and antihypertensive agents with comparatively higher bioactive effect when compared with muscle protein hydrolysates (Kim *et. al.*, 2001).

Bioactive properties of peptides from fish and fish processing waste

Neuroprotective Activity

Hydrolysed fish waste proteins exhibit neuroprotective effects against neurogenerative disorders like Alzheimer's disease. Protein hydrolysates prepared from skate skins exhibited neuroprotective activity due to presence of a-secretase inhibitory peptide. Improved neuroprotective activities were also observed in enzymatically produced salmon skin protein hydrolysates (Choi and Choi, 2015).

Antioxidative properties

To extend the shelf life of foods with higher lipid content, it is essential to protect them from oxidative deterioration wherein, antioxidants play an important role which are of synthetic nature and are carcinogenic. These antioxidants can be replaced by antioxidants sourced from natural resources. Enzymatically hydrolysed fish waste proteins exhibit higher antioxidant potential (Harnedy and Fitzgerald, 2012).

Fish waste protein hydrolysates from pink perch frame waste from surimi processing operations exhibited significant antioxidant properties (Phadke *et al.*, 2016a; Phadke *et. al.*, 2017). Hydrolysate using fish visceral protease enzyme exhibited better antioxidant properties (Murthy *et. al.*, 2017a, Murthy *et. al.*, 2017b).

Anti-inflammatory properties

Fish waste protein hydrolysates exhibit property to fight against inflammation due to their lower molecular weights and short amino acid sequences (Gao *et. al.*, 2020). Protein hydrolysates from bones of salmon and pectoral fins of salmon using papain and pepsin enzymes also showed anti-inflammatory effects (Saisavoey *et. al.*, 2019).

Calcium binding properties

Bone calcification is important and it may be improved by calcium binding properties. Ca salt formation was inhibited by hoki frame protein hydrolysates having Val–Leu–Ser–Gly–Gly–Thr–Thr–Met–Tyr–Ala–Ser–Leu–Tyr–Ala–Glu as peptide sequence (Jung and Kim, 2007).

Wound healing properties

Healing of wounds involves two phases namely proliferation, cell migration and formation of a new intracellular matrix. Enzymatically produced silver carp bone protein hydrolysates exhibited better wound healing activity explaining utilization of fish waste protein hydrolysates in wound healing (Iosageanu et. al., 2021).

Anticoagulant properties

Occlusion of the coronary artery may occur if blood coagulation process is not controlled properly. Anticoagulants from yellowfin sole protein hydrolysate exhibited activated coagulation factor XII forming an inactive compound (Rajapakse *et. al.,* 2005).

Antihypertensive properties

Nearly a quarter of the world's population suffers from hypertension. Hypertension has a multitude of harmful effects on the human body, including an increased risk of coronary artery disease, stroke, cardiac arrhythmia, heart failure, and abnormal renal function, as well as a plethora of other concerns associated with structural damage to the cardiovascular system.

The renin-angiotensin system (RAS) is a major humoral vasoconstrictor and vasodilator system involved in blood pressure regulation. It regulates blood pressure, electrolyte balance, renal, neurological, and endocrine functions in the body that are associated with cardiovascular regulation (Murray and Fitzgerald, 2007). ACE inhibition is regarded as important in regulating blood pressure and treating hypertension. Due to side effects of synthetic ACE-I inhibitors, naturally sourced ACE inhibitory peptides may be used as an alternative treatment in prevention and treatment of hypertension.

Peptides derived from fish waste hydrolysates have shown excellent ACE inhibition activity due to their high affinity for ACE active sites blocking or altering the conformation of site (Kumagai *et. al.*, 2021).

Antihypertensive properties are usually attributed to the amino acid sequence of peptides, hydrophobic properties and chain length. Pink perch frame waste exhibited 69% ACE-I inhibition when enzymatically hydrolysed peptides were evaluated for antihypertensive properties (Phadke *et al.*, 2016a)

Antimicrobial properties

Microbial growth responsible for fish spoilage is retarded by antimicrobials. To prevent hazardous effects of synthetic antimicrobials, fish waste protein hydrolysates are safer to utilize.

Antimicrobial peptides are thought to work by forming membrane pores and then penetrating the cell, allowing microbial biological components to be released and the cell to be destroyed (Song *et. al.*, 2012). Secondary raw materials from *Scomber scombrus* exhibited antimicrobial effect against *E. coli* and *Listeria innocua* (Ennaas *et. al.,* 2015).

Anticancer properties

Cancer is considered as one of the leading causes of death nowadays. Naturally derived enzymatically hydrolysed bioactive peptides from seafood processing waste reported to have anticancer potential.

Peptides derived from seafood processing waste demonstrated better properties to act against cancer cells (Picot *et. al.*, 2006). However, there is paucity of literature available on in-vivo studies and cell line studies to evaluate the anticarcinogenic effect of peptides derived from waste of seafood processing.

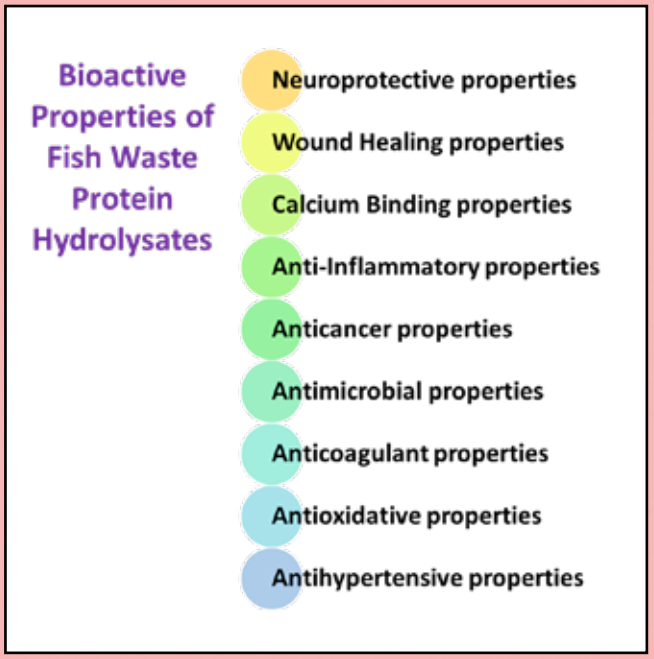


Fig. 1: Bioactive properties of fish protein hydrolysates

In general, enzymatically hydrolysed fish protein hydrolysates are used as dietary supplements or nutraceuticals under a variety of brand names. Various researchers have demonstrated bioactive properties of fish waste protein hydrolysates. However, using fish waste to create physiologically active protein hydrolysates on an industrial scale is possible following a comprehensive evaluation of its safety.

References

Chalamaiah M., Hemalatha R., Jyothirmayi T., 2012. Fish Protein Hydrolysates: Proximate Composition, Amino Acid Composition, Antioxidant Activities and Applications: A Review. Food Chem. 2012, 135, 3020–3038.

Choi D. Y., Choi H. 2015. Natural Products from Marine Organisms with Neuroprotective Activity in the Experimental Models of Alzheimer's Disease, Parkinson's Disease and Ischemic Brain Stroke: Their Molecular Targets and Action Mechanisms. Arch. Pharm. Res. 2015, 38, 139–170.

Ennaas N., Hammami R., Beaulieu L., Fliss I. 2015. Production of Antibacterial Fraction from Atlantic Mackerel *(Scomberscombrus)* and Its Processing by-Products Using Commercial Enzymes. Food Bioprod. Process. 96, 145–153.

Gao R., Shu W., Shen Y., Sun Q., Bai F., Wang J., Li D., Li Y., Jin W., Yuan L. 2020. Sturgeon Protein-Derived Peptides Exert Anti-Inflammatory Effects in LPS-Stimulated RAW264. 7 Macrophages via the MAPK Pathway. J. Funct. Foods, 72, 104044.

Harnedy P. A., FitzGerald R. J. 2012. Bioactive Peptides from Marine Processing Waste and Shellfish: A Review. J. Funct. Foods, 4, 6–24.

Iosageanu A., Oancea A., Ilie D., Anton E. D., Craciunescu O., 2021. The Effect of Fish Bone Bioactive Peptides on the Wound Healing Process: An in Vitro Study on Keratinocytes. Rom Biotechnol Lett, 26, 2692–2699.

Jung W. K., Kim S. K., 2007. Calcium-binding peptide derived from pepsinolytic hydrolysates of hoki *(Johnius belengerii)* frame. Eur Food Res Technol 224, 763–767. https://doi.org/10.1007/s00217-006-0371-4

Kim S. K., Kim Y. T., Byun H. G., Nam K. S., Joo D. S., Shahidi F. 2001. Isolation and Characterization of Antioxidative Peptides from Gelatin Hydrolysate of Alaska Pollack Skin. J. Agric. Food Chem. 49, 1984–1989.

Kumagai Y., Toji K., Katsukura S., Morikawa R., Uji T., Yasui H., Shimizu T., Kishimura H. Characterization of ACE Inhibitory Peptides Prepared from Pyropia Pseudolinearis Protein. Mar. Drugs 2021, 19, 200.

Murray B. A.; FitzGerald R. J. Angiotensin Converting Enzyme Inhibitory Peptides Derived from Food Proteins: Biochemistry, Bioactivity and Production. Curr. Pharm. Des. 2007, 13, 773–791.

Murthy L. N., Phadke G. G., Mohan C. O., Chandra M. V., Jeyakumari A., Visnuvinayagam S., Parvathy U., Ravishankar C. N., 2017b. Characterization of spray dried hydrolyzed proteins from pink perch meat added with maltodextrin and gum arabic. Journal of Aquatic Food Product Technology, 26(8): 913-928. DOI: 10.1080/10498850.2017.1362684.

Murthy L. N., Phadke G. G., Parvathy U., Jeyakumar A., Joshy C. G., Zynudheen A. A., Ravishankar C. N., 2017a. Valorization of fish viscera for crude protease production and its use in bioactive protein hydrolysate

preparation, Waste and Biomass Valorization, 9(10): 1735-1746. DOI: 10.1007/s12649-017-9962-5.

Ozogul F., Cagalj M., Šimat V., Ozogul Y., Tkaczewska J., Hassoun A., Kaddour A. A., Kuley E., Rathod N. B., Phadke G.G., 2021. Recent developments in valorization of bioactive ingredients in discard/seafood processing by-products, Trends in Food Science & Technology, doi: https://doi.org/10.1016/j.tifs.2021.08.007.

Phadke G. G., Elavarasan K., Shamasundar B. A., 2016a. Bioactive and functional properties of fish protein hydrolysates from fish frame processing waste using plant proteases. Environmental Science and Pollution Research, 23 (24): 24901-24911, DOI 10.1007/s11356-016-7618-9.

Phadke G. G., Murthy L. N., Pagarkar A. U., Sofi F. R., Sabha Nissar K. K., 2016b. Fish processing waste protein hydrolysates: a rich source of bioactive peptides. Chapter 7. Part II: Potential Source of Proteins, amino acids, oils and safety of food and food products In: Innovative Food Science and Emerging Technologies – The Science behind Health, Rajakumari Rajendran, Anne George, Nandakumar Kalarikkal and Sabu Thomas (Eds.), Apple Academic Press, CRC Press, p. 199-214. ISBN: 9781771886611.

Phadke G. G., Rathod N. B., Ozogul F., Elavarasan K., Karthikeyan M., Shin K., Kim S. K., 2021. Exploiting of Secondary Raw Materials from Fish Processing Industry as a Source of Bioactive Peptide-Rich Protein Hydrolysates, Marine Drugs, 21: 9, DOI: https://www.mdpi.com/1660-3397/19/9/480.

Phadke G. G., Sofi F. R., Pagarkar A. U., Singh S., Satam S. B., 2017. Bioactive peptides from fish processing waste: A review. In: Fish and Aquatic Resources. Edition 1st, Eds. Sakhare V. B., Vasanthkumar B., Bharambe C. M., Daya Publishing House, New Delhi – 110 002, India, pp: 91-98.

Picot L., Bordenave S., Didelot S., Fruitier-Arnaudin I., Sannier F., Thorkelsson G., Berge J. P., Guerard F., Chabeaud A., Piot J. M. 2006. Antiproliferative Activity of Fish Protein Hydrolysates on Human Breast Cancer Cell Lines. Process Biochem., 41, 1217–1222.

Rajapakse N., Jung W. K., Mendis E., Moon S.H., Kim S.K. 2005. A Novel Anticoagulant Purified from Fish Protein Hydrolysate Inhibits Factor XIIa and Platelet Aggregation. Life Sci., 76, 2607–2619.

Saisavoey T., Sangtanoo P., Reamtong O., Karnchanatat A. 2019. Free Radical Scavenging and Anti-Inflammatory Potential of a Protein Hydrolysate Derived from Salmon Bones on RAW 264.7 Macrophage Cells. J. Sci. Food Agric. 99, 5112–5121

Song R., Wei R. B., Luo H. Y., Wang D. F. 2012. Isolation and Characterization of an Antibacterial Peptide Fraction from the Pepsin Hydrolysate of Half-Fin Anchovy *(Setipinnataty)*. Molecules, 17, 2980–2991.

Blueline Group
Since 1968

Blueline®
Foods(India)Pvt Ltd

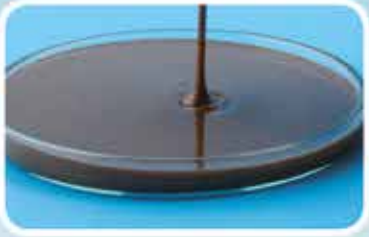
FISHERIES • AGRI • CONSTRUCTION • REAL ESTATE

AN ISO 9001:2015, ISO 22000:2018, ISO 14001:2015 & ISO 45001:2018, HACCP, HALAL, GMP+ & EU CERTIFIED COMPANY

Manufacturers & Exporters Of

FISH MEAL, FISH OIL, FISH SOLUBLE PASTE & OTHER MARINE PRODUCTS





★ TWO STAR EXPORT HOUSE ★

4th Floor, Suite No 406, Crystal Arc, Balmatta Road, Mangalore - 575 001, Karnataka, India

Ph: +91-824-2427744 / 2441466

Email: info@bluelinefoods.in, bluelinefoods@yahoo.in

E-Brochure is available here http://www.bluelinefoods.in/ebrochure

www.bluelinefoods.in

SEAFOOD PROCESSING

Freezing

Cooking

Frying

Coating

VDO & Brochure

By adding value and throughput to your process

We're with you, right down the line.™

infoasia-jbtfoodtech@jbtc.com | **jbtc.com**

Training programmes by MPEDA-NETFISH

Odisha

MPEDA –NETFISH, Odisha conducted 8 nos. of fishing vessels based training programme at Paradeep Fishing Harbour, Odisha during July 2023 under Paradeep Port Trust, Paradeep CSR Fund. Fishing vessel owners, crew members, skippers, supervisors, net menders etc. attended the training programme.

The main subjects were fish quality management, reduction of post harvest loss, chilled killing practices, chilled killing method, conservation of marine resources , fishing ban period, use of square mesh, sanitation and hygiene of the fishing vessels.

Mr. Subhrakanta Mohapatra, State Coordinator, NETFISH-Odisha conducted the training programme along with Harbour data collector.

View of the training programme

Kolkata

MPEDA-NETFISH, Kolkata conducted a one day seafood unit training and pre-processing training programme on 9th August 2023 at M/s. S. S. Seafood, Digha, Purba Medinipur and M/s. IFB Agro Industries Ltd.- PPC at Kalinagar, Purba Medinipur on “Hygiene & Sanitation Practice and Processing”.

Total of 33 participants including manager, QC technologists, supervisors and workers participated in the training programme. Hygienic handling practices, sanitation, personal hygiene, hazards, and quality management related topics were taught by Mr. Atanu Ray, State Coordinator, MPEDA- NETFISH, Kolkata.

Demonstration of hygiene & sanitation practices and preparation of value added products were also covered.

Certificates were distributed among the trainees after evaluation.

View of the training session

View of the training session

Distribution of certificate to the participants

CONVEYOR BELTS

DISCOVER
OUR BELTS

GET RELIABLE FREEZING SOLUTIONS

WITH OUR CONVEYOR BELTS

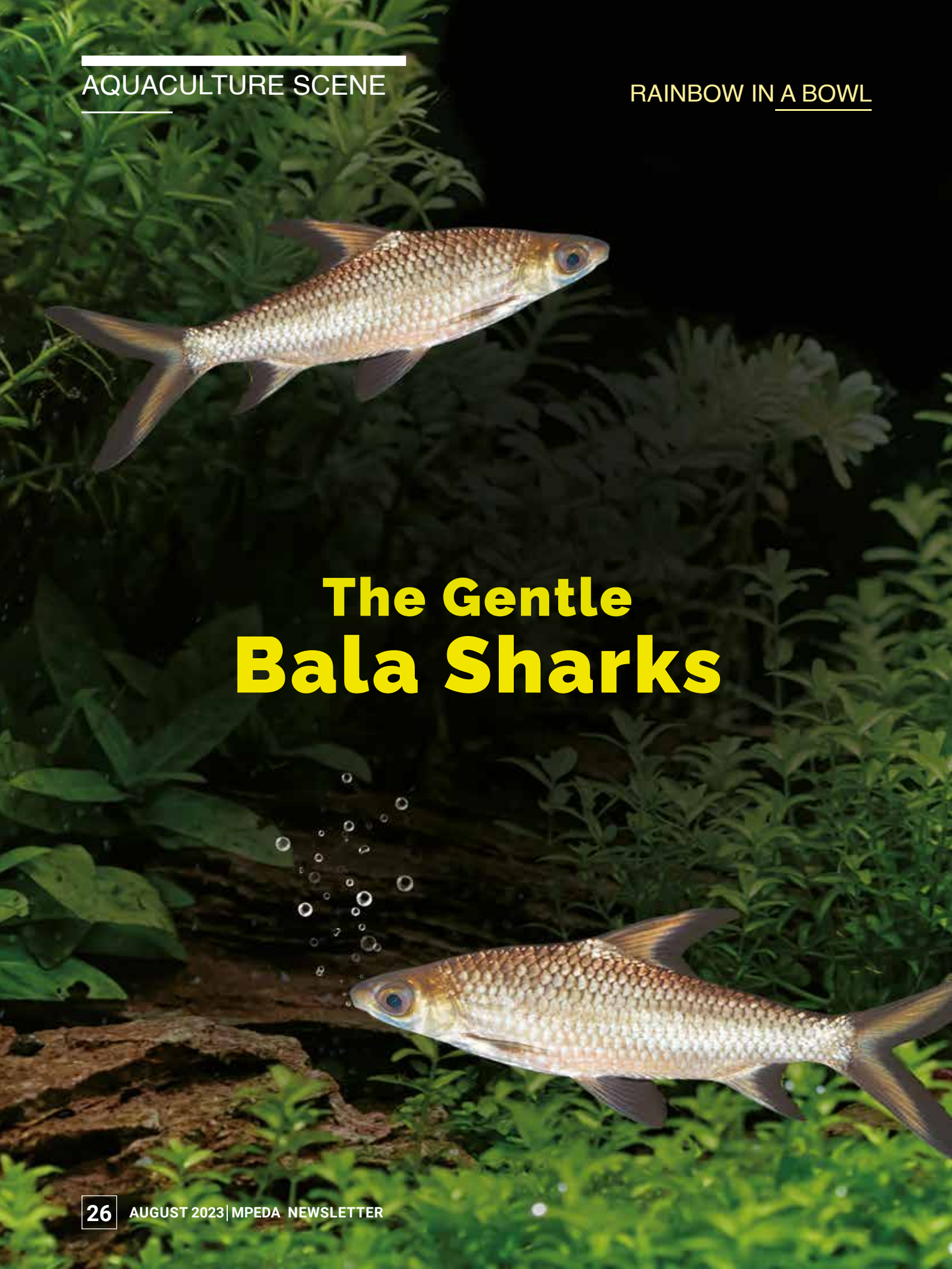
- \+ FREEZING PERFORMANCES
- \+ PLANT LIFETIME
- − OPERATIONAL COSTS

Straight conveyor belts

Curved conveyor belts

Costacurta is specialised in the design and manufacture of metal conveyor belts.
To discover our offer for the Indian market, scan the QR code.

Costacurta



The Gentle Bala Sharks

RAINBOW IN A BOWL

V. K. Dey

V. K. Dey has over three decades of experience in diverse sectors of seafood industry in Asia- Pacific region. He was the Deputy Director of MPEDA and then associated with INFOFISH, Malaysia. As part of INFOFISH, he was involved in several studies related to seafood industry in the Asia-Pacific region and beyond, including setting up of Aqua-technology Park for ornamental fish. MPEDA has published Living Jewels, a collection of his articles on ornamental fish.

Bala shark, as popularly known, is a short form of its Latin name, *Balantiocheilus melanopterus*. They belonging to the family, Cyprinidae and are native of Malaysia, Thailand, Cambodia and Indonesia (Sumatra and Borneo). They are also known as the tricolor shark or silver shark or Malaysian shark or shark minnow. They inhabit large and medium sized water bodies such as lakes and rivers. The term 'shark' is derived from their superficial resemblance of its dorsal fin to that of shark. They have an elongated slender body with an attractive silver colour, slightly darker towards the top and lighter towards underbelly and with a slightly golden sheen to the sides. The fins and tail have a white or golden area with a broad black edge. The dorsal fin is triangular and erect.

They are active, peaceful and grow to fourteen inches and prefer living in mid water shoals. So the typical community aquarium is too small for keeping them long term. Even though they grow large, it will not bother other fish, except those small enough to fit in its mouth. Ideally it should be kept in groups of six or more, but not less than three. They are primarily bottom feeders, their lips can be extended into a tube to delicately pick up food. In their native rivers and lakes, they pick up their main food, bloodworms, from the soft substrate without disturbing sediment. In captivity, they accept all foods, including flakes. The fish is primarily carnivorous, but may bother soft plants. Live, frozen, and freeze-dried foods are its favorites. Depending on the origin of the fish, the fin colouration may be silver to yellowish white or even slightly orange. A proper diet will intensify the colors in the fins, as will keeping this fish against a dark background. White gravel or background will cause colors to fade.

They grow up to 25-30 cm in size and seem to be tolerant of most water conditions and temperatures. The water should be soft to moderately hard (5 dGH) and slightly acidic, with pH 6.5 – 7.0. Ideal temperature ranges from 24 -26^{0}C. It's hard to distinguish the sexes as there are no obvious differences, but females may be smaller than a male of the same age. Though fish farms in Asia breed this fish in large numbers for commerce, do not expect to spawn them in a home aquarium. Commercial breeders use hormone injections to condition the fish and to get them to spawn.

They are considered to be endangered species and included under the IUCN Red List of threatened species as they are becoming very rare in many of their native water ways. *Balantiocheilus melanopterus* was previously considered monotypic with only a single member of its genus. Two leading experts on Asian Fishes have recently described a second species from the genus, *Balantiocheilos* and named the new species as *B. ambusticauda*. Compared to the former, it has a shorter snout, narrow black margins on the pelvic and anal fins, and a posteriorly directed groove at the rictus versus straight in *melanopterus*. It is believed that the new species might already be extinct.

nexgen

QUALITY MATTERS

KINGFISH
INDIA'S # 1 FLOATING FISH FEED BRAND

iFEED
THE TRUE VANNAMEI FEED

iFEED+
THE TRUE VANNAMEI FEED

imin
A COMPREHENSIVE BIO-AVAILABLE MINERAL MIXTURE

Aigienic
A better way to treat the water to maintain its quality.

Aipro
A Power Packed Probiotic Blend To Improve Soil And Water Quality

AiproPS
Comprehensive solution for ecofriendly pond bottom management

ilite
A COMPLETE NATURAL POND CLEANSER

NO 1 FLOATING FISH FEED BRAND IN INDIA	NO 2 FEED MANUFAC-TURING COMPANY IN INDIA	1 IN TOP 3 SHRIMP FEED MANUFACTURERS IN INDIA	90% CUSTOMER SATISFACTION	3 FACTORIES
12 PRODUCTION LINES	3 R&D CENTERS	>2000 PROMISED EMPLOYEES	>1000 CHANNEL PARTNERS	>10000 SATISFIED FARMERS






DEEPAK NEXGEN FEEDS PVT. LTD.

FACTORY ADDRESS: RS NO 53/1, KOYYUR ROAD, BOMMULURU VILLAGE, BAPULAPADU MANDAL, HANUMAN JUNCTION POST, KRISHNA DIST, ANDHRA PRADESH -521105

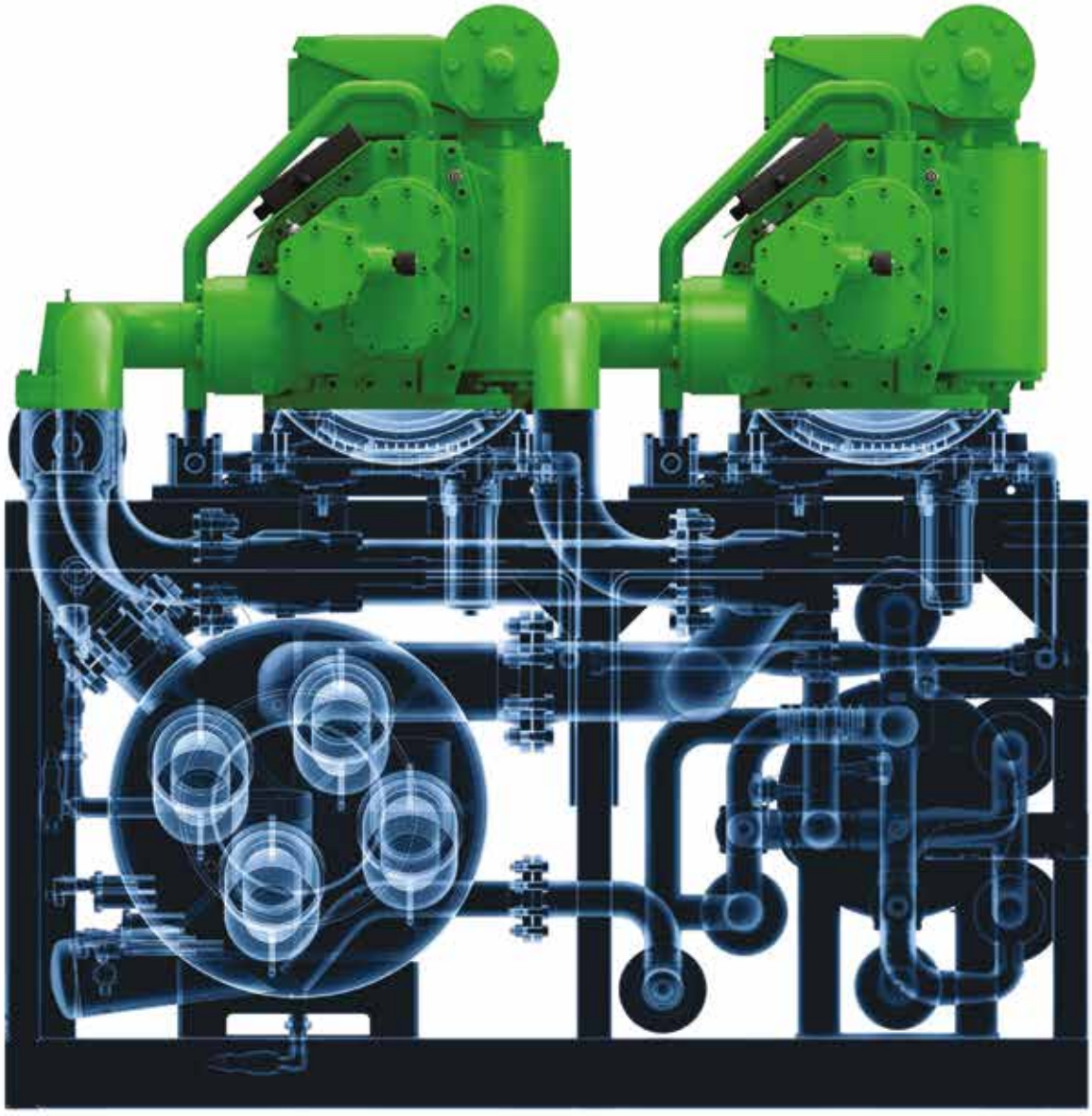
Email : nutrition@nexgenfeeds.in

Details of the SPF *P. vannamei* brooders imported & quarantined at AQF during June 2023

Sl. No	Name of the stakeholders	State	Country of origin/ supplier	Date of receipt of the lot at AQF arrival	Broodstock imported (nos)		
					Male	Female	Total
1	Makineedi Hatcheries	Andhra Pradesh	SIS, Florida	03.06.23	600	600	1200
2	Devi Seafoods Ltd	Andhra Pradesh	SIS, Florida	08.06.23	250	250	500
3	Saran Saai Hatcheries	Andhra Pradesh	SIS, Florida	08.06.23	200	200	400
4	Golden Prawns Pvt. Ltd	Andhra Pradesh	Blue Genetics, Mexico	12.06.23	400	400	800
5	Samudra Hatcheries Pvt. Ltd	Andhra Pradesh	SIS, Florida	15.06.23	125	125	250
6	Sun Hatcheries - Unit II	Andhra Pradesh	SyAqua Americas Inc, Florida	16.06.23	250	250	500
7	Anjaneya Marine Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	16.06.23	250	250	500
8	Vaisakhi Bio-Resources Pvt. Ltd	Andhra Pradesh	SyAqua Americas Inc, Florida	16.06.23	300	300	600
9	Seven Staar Aquatech	Tamil Nadu	SIS, Florida	17.06.23	200	200	400
10	Empire Marine Harvest	Tamil Nadu	SIS, Florida	17.06.23	200	200	400
11	Avanti Feeds Unit I	Andhra Pradesh	SIS, Florida	18.06.23	350	350	700
12	Sri Manjunadha Hatcheries	Andhra Pradesh	SIS, Florida	18.06.23	300	300	600
13	Sheng Long Bio Tech (India) Pvt. Ltd	Tamil Nadu	SIS, Florida	21.06.23	260	260	520
14	CP Aquaculture (India) Pvt. Ltd - Mukkam	Andhra Pradesh	American Penaeid, Florida	23.06.23	200	200	400
15	CPF (India) Pvt. Ltd	Tamil Nadu	American Penaeid, Florida	23.06.23	200	200	400
16	Sandhya Aqua Exports Pvt. Ltd	Andhra Pradesh	SIS, Florida	23.06.23	300	300	600

17	Vaisakhi Bio-Marine Pvt. Ltd - Unit III	Andhra Pradesh	American Penaeid, Florida	24.06.23	600	600	1200
18	Vaisakhi Bio-Marine Pvt. Ltd - Unit I	Tamil Nadu	SIS, Florida	25.06.23	300	300	600
19	Sree Victory Shrimp Products Pvt. Ltd	Andhra Pradesh	American Penaeid, Florida	26.06.23	300	300	600
20	Shirdi Sai Hatcheries	Tamil Nadu	American Penaeid, Florida	26.06.23	200	200	400
21	Sun Glow Marine	Tamil Nadu	American Penaeid, Florida	26.06.23	200	200	400
22	Ananda Foods	Andhra Pradesh	SIS, Florida	28.06.23	200	200	400
23	Sri Sai Hatchery & Prawn Culture Pvt. Ltd	Andhra Pradesh	SIS, Florida	28.06.23	250	250	500
24	Vaisakhi Bio-Resources Pvt. Ltd - Plant II	Andhra Pradesh	SIS, Florida	29.06.23	250	250	500
25	Vaisakhi Bio-Resources Pvt. Ltd - Plant II	Andhra Pradesh	SIS, Florida	29.06.23	250	250	500
26	Aqua Prime I nternational (India) Pvt. Ltd	Andhra Pradesh	SyAqua Americas Inc, Florida	30.06.23	300	300	600
27	Gayathri Hatcheries	Andhra Pradesh	SyAqua Americas Inc, Florida	30.06.23	300	300	600
TOTAL					**7535**	**7535**	**15070**

DAS HERZ DER FRISCHE



BITZER India Pvt. Ltd.
Office No – 604 & 605, 6th Floor, B – Wing, Powai Plaza Building,
Hiranandani Garden, Powai, Mumbai – 400076. India
Tel.: +91 22 6908 6908
www.bitzer.in

Seafood HACCP basic training programme conducted by MPEDA Regional Division, Veraval

MPEDA Regional Division, Veraval organized four day Seafood HACCP basic training programme from 18th to 21th July 2023 in Veraval, Gujarat to empower the technologists of seafood processing plants registered under Regional Division, Veraval with Seafood HACCP and related regulations. 25 technologists working in seafood industry in and around Veraval and 2 in-house officials participated in the training programme.

The training programme was inaugurated by Mr. Ketanbhai Suyani, Regional President SEAI-Gujarat, who emphasized on the importance of the quality and safety of seafood exported from the country to achieve higher export targets in his inaugural address.

Mr. Gopal Pavar, Deputy Director, EIA Veraval, Dr. Ashish kumar Jha, ICAR-CIFT Veraval, Mr. V. Vinod, Deputy Director (QC), MPEDA and Dr. Sajid Yusufzai, Principal, College of Fisheries, Veraval offered felicitation. The inaugural programme ended with a vote of thanks by Mr. S. M. Shirodkar, AD MPEDA.

The training sessions were handled by Mr. V. Vinod, Deputy Director (QC), MPEDA, Mr. Subray Pavar and Mr. Kishorkumar Vaniya, Assistant Directors of MPEDA. The training programme covered course introduction, Current Good Manufacturing Practices, Sanitation Standard Operating Procedures, Principles of HACCP and Development of HACCP Plan Form.

Apart from above, faculty also covered US Seafood regulations, traceability followed by practical sessions in different groups for preparation of SSOP documents, development of HACCP Plan for various seafood products.

Inaugural ceremony

Mr. Ketanbhai Suyani, Regional President-SEAI delivering inaugural speech

Mr. V. Vinod, chief faculty of MPEDA distributing digital certificate to participant

Participants with the officials

JiraKorn

Food Additives

"Think Food Additives Think Jirakorn"

Jirakorn Co., Limited (Thailand) is a leading provider of various high quality and innovative food ingredients with almost 50 years of experience.

TRITON TRADING CORPORATION
Distributor for India
Email : tritontradingcorp@gmail.com
Customer Care No : **9388418750**

CUSTOM BLEND for shrimp

- **Non-Phosphates**
- **Mixed-Phosphates**

FOOD ADDITIVES

We can supply customized food additives or any of our diverse range of products to your liking.

"Just the way you like It"

Digital platform empowers stakeholders in the growing seaweed industry

The Algae Store is a new digital platform facilitating the seaweed sector in India, providing a one-stop solution for networking, buying, selling, and formalization. It aims to bridge the gap between demand and supply sustainably and increase the visibility and market access for cultivators and buyers. It is expected to launch in September.

Sakshi Gore (Founder), with the support of the Kochi-based Centre for Public Policy Research (CPPR) and in collaboration with the US Consulate General in Chennai, developed the platform to enhance visibility, both domestically and internationally, and offer various services to cultivators and buyers.

According to Gore's project report, seaweeds have diverse applications across industries such as agriculture, cosmetics, food, pharmaceuticals, and packaging. Despite India's extensive coastline of over 7,500 km, commercial seaweed cultivation is primarily limited to Tamil Nadu, Gujarat, and Maharashtra.

Currently, the country has a small community of approximately 70-120 seaweed farmers, but efforts are underway to organize the sector and bridge the gap between demand and supply in a sustainable manner.

To boost seaweed production, the Pradhan Mantri Matsya Sampada Yojana (PMMSY) has allocated ₹640 crores. Although, India is home to around 844 reported seaweed species, including red, green, and brown algae, only a limited number have achieved commercial success.

According to FAO data, Asia accounts for 98% of global seaweed production, with China ranking first at 56.8%, followed by Indonesia at 28.6% and South Korea at 5%.
While India has yet to emerge as a major seaweed producer, there has been a significant increase in demand for seaweed biomass.

thefishsite.com

RANDOX
FOOD DIAGNOSTICS

Seafood Screening Simplified

Randox Food Diagnostics provide a wide range of seafood testing solutions for processors to ensure best aquaculture practices.

Malachite Green ELISA

- Excellent Specificity
- Rapid & Reliable
- Excellent Shelf Life

Randox also offer a new DNSH ELISA for the detection of nitrofurans.

randoxfood.com info@randoxfood.com

From machine learning to bacteriocins to probiotics, novel alternatives are tackling disease in aquaculture

Volatility in fish feed and farm gate prices can certainly strain aquaculture operations, but nothing rivals the economic impact of sudden disease outbreaks. Aquaculture's global expansion and intensification have made such outbreaks more common. Shrimp farming is one example. The emergence of Early Mortality Syndrome (EMS) over a decade ago highlighted the need for rigorous disease control and biosecurity measures. As aquaculture grows, farming intensification escalates, amplifying the disease challenge and making effective management an essential aspect of sustainable growth.

For aquaculture, one strategy for tackling disease is the use of antibiotics. However, their overuse has resulted in challenges such as antibiotic resistance – wherein these medications lose their effectiveness over time. This not only threatens aquaculture species but also impacts human health, rendering the most potent antibiotics increasingly ineffective with limited alternatives. Organic in Scientific uses proprietary machine learning algorithms in the discovery of novel bacteriocins as an antibiotics alternative. Because every bacteria produces a bacteriocin, that can specifically inhibit a problematic bacterial pathogen.

Organicin Scientific is using bacteriocins to prevent vibrio infection in farmed shrimp, improving the survival of challenged shrimp and addressing diseases like EMS.

In fact, Organicin Scientific's bacteriocin-incorporated feed has improved the survival of shrimp with EMS by nearly 200 percent, as well as maintaining activity after exposure to high heat and pressure. Given the high thermostability of bacteriocins, they can be easily incorporated into feed at the manufacturer level, endure the heat extrusion process and be directly fed to the species, making their adoption straightforward for farmers and minimizing any necessary changes to the rearing process.

'It's a process'

Dr. Melba G. Bondad - Reantaso, team leader of the FAO Fisheries and Aquaculture Division, is the lead author of

a review paper on antibiotics use in aquaculture. With worldwide attention on issues like antibiotic resistance and residues, she points to the FAO Action Plan on Antimicrobial Resistance 2021–2025 that supports global efforts to address antibiotic resistance in food and agriculture.

With objectives including increasing stakeholder awareness and engagement, strengthening surveillance and research, enabling good practices, promoting responsible use of antibiotics, strengthening governance and allocating resources sustainably towards a concerted One Health approach, Bondad - Reantaso says that "any actor in the value chain can help combat antibiotic resistance through any of these objectives."

Bondad - Reantaso agrees that aquaculture should continuously explore alternatives.

There are already many, including vaccines, phage therapy, quorum quenching, probiotics, prebiotics, chicken egg yolk antibody (IgY) and plant therapy.

Meanwhile, specific pathogen free (SPF) stocks are becoming a primary and essential part of biosecurity strategies. These alternatives have great potential; some have proven benefits while others are still in the experimental stage. Of these, vaccines have been widely used against fish infections.

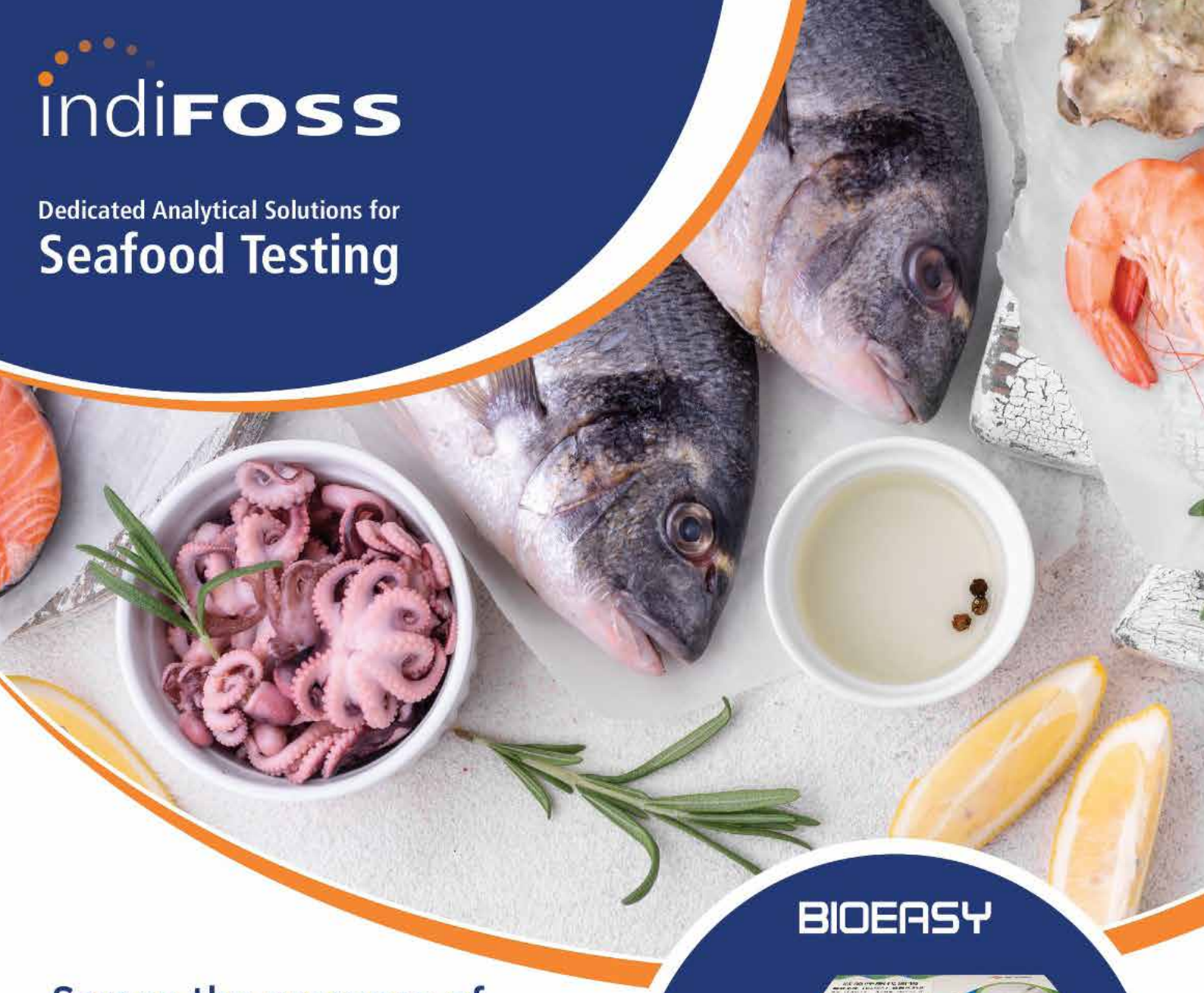
Nonetheless, Bondad-Reantaso said these alternatives should be "carefully considered" based on factors related to a country's needs, aquaculture system and species, targeted pathogens, ease of administration, economics (cost-benefit), risks and public perceptions. "Good aquaculture and biosecurity practices including the prudent, responsible use of antibiotics and their alternatives, underpins the basic actions that may reduce the likelihood of antibiotic resistance," said Bondad - Reantaso. "Having a biosecurity plan, and being part of a national strategy on aquatic organism health management, can reduce the introduction and spread of infectious agents and their transmission to other areas."

globalseafood.org

indiFOSS

Dedicated Analytical Solutions for

Seafood Testing



BIOEASY

ELISA Test Kit

Screen the presence of Antibiotics in sea food with **Bioeasy ELISA Test Kit**

- Incubation time of 5 to 30 minutes
- Technology approved by EIA

IndiFOSS Analytical Pvt. Ltd.

F-1,2,3, Science Square, Above Reliance Fresh, Science City Road, Sola, Ahmedabad - 380 060. (Gujarat) INDIA

Phone : +91- 72269 93030 | e-mail : marketing@indifoss.com

www.indifoss.com

Innovation is problem solving

What makes an invention or a new business truly work is the need that it addresses or the problem that it solves. This past month the Advocate featured two new and completely different ideas that are great examples of how seafood production can improve with better tools and technologies.

Fixed-gear fishermen, like Maine lobster harvesters, use some fairly old-fashioned equipment on their boats, but their traps could soon be outfitted with innovative bait bags made with an alternative to the traditional plastic bags used today. Maine entrepreneur Katie Weiler, founder of Viable Gear, is using a polymer derived from seaweed to make new products for fishing and aquaculture.

Weiler told us and the Aquademia Podcast that the lobstermen she's met with are eager for an alternative to plastic bait bags. She also noted that there's going to be a huge demand for seaweed raw material because of the product's seemingly limitless uses. Any way that seafood can limit its contributions to plastic pollution in the ocean is a win.

In Kenya, entrepreneur David Okech Okech knew from firsthand experience as a fish farmer that the livelihood he shared with nearly 50,000 other small-scale producers in the region needed greater structure and stability. So he took matters into his own hands and developed Aquarech, a mobile technology developed specifically to bring tilapia farmers, traders and feed companies together. Aquarech procures quality feed and delivers it to farmers, helps with data management, guarantees a market for their fish and helps secure access to financing and insurance providers. The company has 2,000 farmers signed up and is seeking to grow to 10,000 next year.

These disparate businesses will each be successful if their respective marketplaces embrace their solutions, and it looks like they've done the work to ensure that result. Aquarech shows that understanding the pain points of production and finding ways to overcome them can convince others to sign on. We've also learned from Weiler and from companies like SafetyNet Technologies that collaboration with the end users, particularly with fishermen during early research and development, is crucial to earn their buy-in.

globalseafood.org

facebook

- FOLLOWERS - 69,287
- POSTS - 31
- VIDEOS - 2
- LIKES - 69,287

twitter

- FOLLOWERS - 8,391
- POSTS - 31
- VIDEOS - 2

Instagram

- FOLLOWERS - 5,124
- POSTS - 31
- VIDEOS - 2

YOUTUBE

- SUBSCRIBERS - 2,738
- VIDEOS - 2

PRAWN FEED

VANNAMEI FEED

BLACK TIGER SHRIMP FEED

BLACK TIGER SHRIMP FEED

AVANTI FEEDS LIMITED

In the business of quality Prawn feed and Prawn Exports

An ISO 9001: 2008 Certified Company

Aiding sustainability & reliability to Aquaculture

Shrimp Hatchery

Feed Plant - Gujarat

Prawn Feed & Fish Feed

Prawn Processing & Exports

INNOVATIVE - SCIENTIFICALLY FORMULATED - PROVEN

- GREATER APPETITE
- HEALTHY & FASTER GROWTH
- LOW FCR WITH HIGHER RETURNS
- FRIENDLY WATER QUALITY

AVANT AQUA HEALTH CARE PRODUCTS

AVANTI A.H.C.P. RANGE

Thai Union
IN COLLABORATION WITH:
THAI UNION FEEDMILL CO., LTD.,
Thailand.

Avant Miner Mate — Chelated Trace Mineral Supplement

Avant Saldo Mixtos — Marine Mineral

Avant D-Flow — Water Quality Improver

Avant Pro W — Soil & Water Probiotic

Avant Bact — Gut Probiotic

Avant AmmoniAbsorb — Ammonia Absorber

Avant Life — Oxy-Generator

Avant Immupak — Immunity Enhancer

Avant Catcher 1

Corporate Office: **Avanti Feeds Limited**
G-2, Concord Apartments 6-3-658, Somajiguda, Hyderabad - 500 082, India.
Ph: 040-2331 0260 / 61 Fax: 040-2331 1604. Web: www.avantifeeds.com

Regd. Office: **Avanti Feeds Limited.**
H.No.: 3, Plot No.: 3, Baymount, Rushikonda, Visakhapatnam - 530 045, Andhra Pradesh.

NO. KERENG/2013/61656

TYSERS

Broker at LLOYD'S

Your Security is our Priority

Tysers are specialists in Rejection and Marine/Transit insurance. We are committed to providing innovative, bespoke insurance solutions to cater for the diverse nature of your insurance needs.

Our in-depth knowledge and understanding of the seafood business enables us to provide you with the highest levels of service for your business.

To find out more about our services please contact:

Raja Chandnani - +44 (0)7984 191072 - raja.chandnani@tysers.com

www.tysers.com