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Charoen Pokphand Foods Plc.

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CPF News : CP Foods' holistic approach to farm shrimp sustainability everywhere : CPF enjoys overwhelming interest at Anuga 2019 Vegan Lasagna lauded as 1 of 64 top innovations **Price Performances : CPF**

CP Foods' holistic approach to farm shrimp sustainability everywhere





CP Foods PCL gears to transform the world of shrimp farming once again to a more sustainable industry can provide environmentally safe shrimp anywhere in the world.

With the introduction of the EMS (Early Mortality Syndrome) disease in 2012, shrimp farming has become very challenging. Survival and failure rates continue to be high and this has affected all farmers in the countries that CP Foods has shrimp farming and hatchery operations. To find solution, the company funded the University of Arizona Pathology Laboratory to discover the cause of EMS. Moreover, CP Foods R&D Centre also created successful pond and hatchery management solutions for farms to smooth operation even when the death virus is presented in the environment.

To the successful discovery, both new biosecurity guidelines and new genetic strains of shrimp with tolerance to the disease were developed. Information provided by CP Foods R&D Center has guided the redesign of shrimp farms and ponds that result in better health of the cultured shrimp and a reduction in crop failures.

Mr. Robins McIntosh, Executive Vice President for Shrimp Broodstock Development of CP Foods, stressed that the company is promoting shrimp farm sustainability by emphasizing a holistic approach to farming. It can provide farmers to have all the components required by shrimp farming industry including genetics and broodstock for hatcheries, hatcheries for post larvae or baby shrimp, farms and farming technologies, processing plants with value added capabilities, and a world presence in the market place.

"We can say that CP Foods is the only company in the world that can provide integrated supplies to farmers. This will allow both farmer and the company engage more on traceability. We have never stopped developing technologies to support innovations, which now we also operate a best in world shrimp genetics and broodstock division," stressed Mr. McIntosh.

He pointed that CP Foods' shrimp business strength has derived from four main factors including the company has provided the farmers with disease tolerance to diseases caused by the Taura Virus, the EMS bacterial toxins, and the white spot virus. For instance, the company introduced the Specific Pathogen Free (SPF) P. vannamei Pacific white shrimp to Asia and demonstrated to farmers how to successfully grow this shrimp. With the signature SPF shrimp, the company has applied breeding technologies to continuously increase the growth rates of these shrimp. At the same time, it increased the shrimp robustness in the pond and the tolerance of the shrimp to specific major diseases that have serious economic consequences to farm.

Second, CP Foods has developed the SPF hatchery that produces disease free, healthy post larvae for the farmer. The company also initially brought SPF to the Thai farmer and then expanding most of Asia. Moreover, it was this technology that triggered the extreme growth in Asian shrimp industry from 2004-2011. The cornerstone of sustainability starts with a healthy post larvae that has the genetics to grow fast and survive in a pond environment.

Third, its feed technology has evolved to support a sustainable shrimp industry. Today the company's shrimp feed uses no fishmeal from wild catch fisheries but only uses of fish by product meal. At the same time, its shrimp diet is moving to using only sustainable ingredients; the diet is also maintaining the functionality of supporting the high health and rapid growth of shrimp in ponds.

Also, the leadership role of CP Foods in bringing together an influential and diverse coalition of stakeholders, including seafood companies, NGO, and Government to establish The Seafood Task Force as a more transparent and sustainable supply chain. Its main task is to restore the fishery in the Gulf of Thailand.

Finally, CPF has evolved a new farming technology that improves the biosecurity against the new pathogens in the environment such as EMS, EHP (Enterocytozoon hepatopenaei) and WSSV (White Spot Syndrome Virus). This new technology is based on RAS (recirculating aquaculture systems) principals incorporating smaller ponds designs. RAS is a system that reuses the water and reduces the amount of new water from the environment required. This important technology helps reduce the probability of introducing a pathogen into the system and allows the capture and processing of shrimp wastes so as not to pollute the environment.

As a result, the smaller pond designs with greater control in aerations and keeping the water clean produces higher yields of shrimp per unit area and unit time. These systems combined with the CP Foods faster growing shrimp can produce up to 25 times the yield as classical shrimp farming technologies; making shrimp farming much more efficient and sustainable than any shrimp culture technology of the past.

CP Foods' holistic technology for shrimp farming has been promoted to the customer as the 3 C·s; or clean, clean and clean. It emphasizes the need to really be careful in the preparation of his culture ponds, in the post larvae and feed quality which the farmer uses and manages the ponds. This improved attention to management has become essential with all of the newly introduced diseases and environmental stresses.

In addition, the company also exports such innovative farming technology in which combined of 3C and biosecurity system named "CPF Combined Model" to apply in its shrimp farms in India, Vietnam and the Philippines.

Mr. McIntosh pointed that the key to being sustainable is to address clean genetically improved for today's environment post larvae or baby shrimp; to provide shrimp feed that promotes health using ingredients that are sourced as internationally recognized as sustainable, and transform shrimp farming technology to a RAS system that allows for higher productivity and greater control while preserving water resources and capturing the wastes.

"In 1986, CP Foods demonstrated to the world the future of shrimp farming and CPF nurtured a young world industry to the industry that today makes shrimp affordable to most consumers. The company is now transforming the world of shrimp farming once again to a more sustainable industry and an industry that can provide environmentally safe shrimp anywhere in the world" said Mr.McIntosh.

The Asian environment is becoming increasingly difficult to grow shrimp. Water quality is not as good as it was 20 years ago and that quality and quantity continues to decline. This is hurting the future for Asian aquaculture to grow with technologies that have been used in the past. On the other hand, the Americas have much more undeveloped lands and better quality of environment. When the company looks at the shrimp industry growth rates; the American shrimp industry is showing a higher growth rate and it can expects this trend to continue into the future.

However, shrimp farming in the USA, CP Foods will need to develop an even higher level of RAS for growing shrimp away from any oceans and in a seasonal cold/hot climate. This presents new challenges; but with the holistic capability of CP Foods (genetics, post larvae, feed, and farm development/management), the company is in a very good position to lead the world again in a new and even more exciting direction. Shrimp Anywhere and Anytime. The farm there will be dependent totally on recycled seawater built far from any ocean, and hatcheries likewise will be totally recycled; with zero wastes to the environment.

"CP Foods would expect to become leaders in shrimp in the new world as our technologies are made available to everyone in the world" noted Mr. McIntosh.

CPF enjoys overwhelming interest at Anuga 2019 Vegan Lasagna lauded as 1 of 64

top innovations

Khaosod English, October 9, 2019



Charoen Pokphand Foods PLC (CPF) welcomed a large number of visitors to its booth at Anuga 2019 in Cologne, Germany, while Top Foods' PURE- branded Vegan Lasagna is awarded 1 of 64 top innovations of the world's largest annual food and beverage fair.

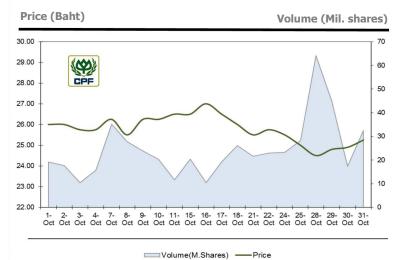
Mr. Prasit Boondoungprasert, Chief Executive Officer of CPF, said that Anuga 2019 presents a good opportunity for CPF to portray its image as a leading integrated food producer in the global trade arena. Driven by sustainable development, CPF's booth is designed under the concept "Put Our Heart Into Food", which is based on the company's key principles – Innovation, People and Planet. It is thus a pleasure that one of the company's products is selected as one of top innovations, which strengthens the company's image as a global innovative food producer.

PURE-branded Vegan Lasagna is a ready-to-eat vegetarian meal. Produced by microwave technology, it maintains tastes and nutritious values without food seasonings and boasts a long shelf life without any preservatives. Notably, its packaging is made from degradable pinewood pulp which helps reduce plastic by 85%. It has been warmly welcomed by consumers during a soft launch. It was bestowed Mercury's 2018 Award that affirmed its standards for airlines and won THAIFEX 2019's Innovation Award.

Benja Chicken, the U Farm-branded premium chicken meat, also chalked up overwhelming interest during its first introduction to the European market. Buyers were impressed with the soft and juicy meat, thanks to the 100% natural production process that is free from antibiotics and growth hormones. It specifically addresses consumer demand for high-nutritious and healthy products.

Anuga 2019 is also the venue where CPF observes movements in the world's food market, which will serve its innovative food development and improvement process and enable it to meet global consumer demands.

Price Performances: CPF



October 2019	
Highest Price	27.00
Lowest Price	24.00
Closed Price	25.25
Average Volume/Day (Shares)	24,450,500

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