LAVISH
NUTRITION PVT.LTD.

Lavish Nutrition Private Limited

We Committed to Serve the Farming Community

Lavish Nutrition Private Limited is an Indian multi-national company that offers healthcare solutions and consultancy for aquaculture, agriculture, poultry and allied agricultural sectors. The company offers healthcare solutions in technology collaboration with Lavish Nutrition Inc. Brazil. The company is having a state of art manufacturing and R&D facilities at Belagaum. We serve the farming fraternity with best products without causing externalities on the environment.

Lavish Nutrition Solutions

LaviPro W

Ensures healthy pond environment

Probiotics are used as an alternative to antibiotics and chemicals. They degrade the organic matter in the aquaculture ponds to improve the aquatic environment, thereby reducing the toxicity levels. The administration of a mixture of bacteria has positively influenced on survival and protective effect against Vibriosis and the White Spot Syndrome Virus (WSSV).

This result was due to stimulation of the immune system by increasing phagocytosis and antibacterial activity. **LaviPro W** has formulated with wide range of probiotic strains which are manufactured by using advanced biotechnologies. The formulated probiotic strains are regarded as environmentally safe and non-pathogenic in nature.

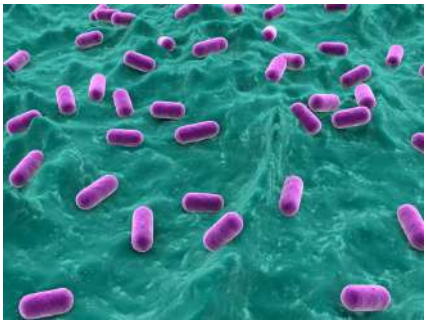
Composition : *Lactobacillus acidophilus, L. plantarum, Microalgae, Bacillus Spp., Sachromyces boulardi, Nitrospira, Nitrosomanas, Nitrobacter, Streptococcus faecium, Paracoccus pantotrophus, Pediococcus acidolactici* and Enzymes (Amylase, Protease, Cellulase, Pectinase, Hemicellulase, Pullulanase, Xylanase and Lipase) with Prebiotics maintained at 30 billion/g.

Benefits :

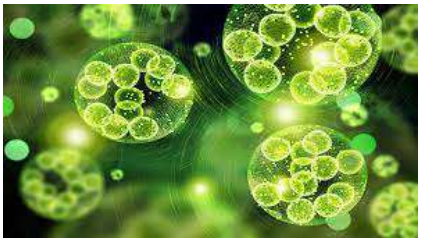
- Reduces loads of pathogenic bacteria in aquaculture systems
- Improves the phytoplankton and water color
- Improves the survivability of aquatic animals
- Reduces toxic gases and bottom pollution
- Improves FCR of Shrimp and Profitability

Dosage : 500gms to1kg/acre

Lactobacillus acidophilus



Pediococcus acidilactici



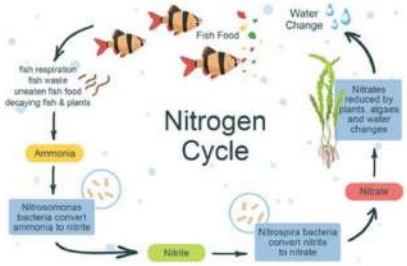
Microalgae

LaviPro BR

Probiotics for Soil Bio-Remediation

The large amount of surface area both on the surface of the biological filter media, as well as the rocks and gravel inside the pond allows for the colonization of beneficial bacteria that are responsible for the nitrification process, changing ammonia to less toxic forms of nitrite and the usable form of nitrate. Regular addition of beneficial bacteria such as **LaviPro BR** Beneficial Bacteria for Ponds helps support the reduction of ammonia. Aquaculture practices demand intensive productions in shorter times, causing stress in crop species. **LaviPro BR** has formulated with wide range of probiotic strains which are manufactured by using advanced biotechnologies. The formulated probiotic strains are regarded as environmentally safe and non-pathogenic in nature.

Composition: *Nitrosomonas spp., Nitrobacter spp., Thiobacillus thiophilus, Thiobacillus novellus and Rhodococcus rhodochrous, Methanococcus vannielii* with Prebiotics and Yeast maintained at 10 billion/g.



Benefits :

- Reduces Ammonia and Nitrites
- Reducing the black soil problems by oxidizing organic matter
- Enhances the soil quality and seed survivability
- Improves FCR of Shrimp

Dosage:

- Pond preparation and deteriorated waters: 2 Kg/Acre
- Regular maintenance: 1 Kg/Acre OR as suggested by Aquaculture Consultant

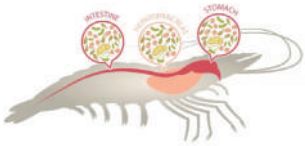
LaviGut

LaviGut

Promotes Gut Health and Digestion

The shrimp digestive system is not sterile and hosts a living and diverse microbiota. Probiotics are used in shrimp feed to help modulate the gut microbiota. Bioremediation solutions contain beneficial bacteria that can be added to ponds to help balance water microbial ecosystems. Probiotics also enhanced growth performance and feed utilization in aquatic animals through increasing digestive enzymes activity. The increase of digestive enzyme activity and improvement of the digestive process following treatment with probiotic has been attributed to production of extracellular enzymes such as proteases, carbohydrolases and lipases. **LaviGut** has formulated with microbial consortia, yeast and enzymes for promoting gut health and feed digestibility. The microbial consortia will colonize in the gut and yields several benefits for the growth of the aquatic animals.

Composition: *Bacillus subtilis, B.licheniformis, B.coagulans, B.megaterium, Saccharomyces boulardii, S. cerevisae* and Multi-Enzymes (Amylase, Protease, Cellulase, Pectinase, Hemicellulase, Pullulanase, Xylanase and Lipase @ each 600000 u/g) and Vitamins.



The shrimp digestive system is not sterile and hosts a living and diverse microbiota.

Benefits :

- Enhance the feed digestibility and nutrients absorption
- Improves the immunity of shrimp
- Minimises white gut problems
- Improves the feed intake
- Improves FCR and growth of Shrimp

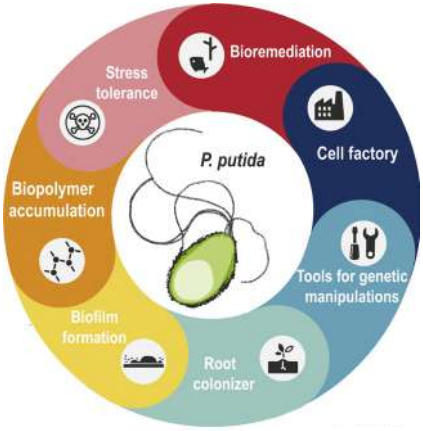
Dosage: 10-20 grams/kg feed OR As suggested by Aquaculture Consultant.

ProRich F

Probiotics for Fish and Shrimp Health

An alternative approach to manage fish health that is fast gaining attention in the aquaculture industry is probiotics, a microbial intervention approach, which has been found to improve not only fish health but in many instances fish growth. **ProRich F** has developed under the supervision of scientists of Lavish Nutrition Inc., Brazil. ProRich facilitates several health and growth benefits for both fish and shrimp in aquaculture systems.

Composition: *Trichoderma harzianum, Pseudomonas striata, Pseudomonas putida, Aspergillus niger, Nitrosomanas sp., Nitrobacter sp., Streptococcus faecium, Bacillus mesentricus, B.subtilis, Sachromyces boulardi* maintained at $7x10^9$ cfu/g and Multi-Enzymes (Amylase, Protease, Phytase, Cellulase, Hemi-cellulase and Lipase @ 100 mg)



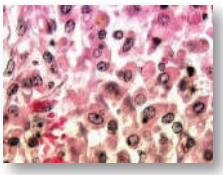
Dosage:
- Regular culture: 1 kg/acre
- Bottom pollution: 2 kg/acre

Soil PS

Sludge Digester

In intensive aquaculture culture systems, feeding increases accumulation of organic matter in pond leading to higher oxygen demand at the mud-water interface and may cause production of Hydrogen Sulfide gas (H_2S). Growth, survival of the shrimp and quality of pond water is greatly affected with pond sludge. Removal of sludge frequently from the pond bottom, the organic nutrients reduces from water and it affects the growth of phytoplankton and pond productivity. Large volume of accumulated shrimp waste will increase oxygen demand and cause oxygen depletion on the bottom that stress shrimp and more susceptible to disease. Also the undesirable gases produced from pond waste can affect the appetite of shrimp, increasing feed conversion ratio and leading to deterioration of water quality. To address the above problems, **SOIL PS** has formulated with following probiotic strains for decomposing the organic matter and minimising the H_2S gas. **SOIL PS** has tested across the different aquaculture production sites and the validated the product.

Composition: Rhodococcus, Rhodobacter, Nitrosomonas and Cellulomonas ($5x10^9$ cfu/ml)



Rhodococcus Sp.

Sludge

Benefits :

- Oxidizes organic sludge
- Reduces H_2S gas formation
- Reduces black soil problem
- Maintains ideal pH and Dissolved Oxygen levels
- Improves FCR and uniform growth

Dosage:

- During culture: 3-5 litre/acre
- Black/Organic sludge/Elevated levels of H_2S gas: 15- 20 litre/acre

CapGEL

Eradicates Microcystis/Filamentous Algae/Snail

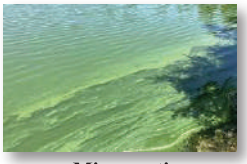
Bad Algae which are referred to as cyanobacteria, Blue-Green Algae (BGA) or Harmful Algal Blooms (HAB), do not serve as a food source for aquatic organisms. Filamentous algae are one of the most common aquatic plant problems faced by pond owners, particularly in the winter season. The overgrowth of these algae can lead to fluctuations in water parameters, including DO and pH. Also, the microcystins produced by these algae are toxic to shrimp/fish. **CapGEL** has formulated with specially developed organic constituents which provides complete results without causing stress to the fish and shrimp. The product would bring best results for all stage of aquaculture practices.

Composition: Chelated Copper

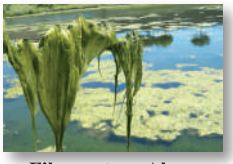
Benefits :

- It reduces microcystis and filamentous algae
- It minimises snail problems
- It overcomes fungal infections
- It reduces black and brown gill problems

Dosage: 2-4 kg/acre OR As suggested by Aquaculture Consultant



Microcystis



Filamentous Algae

Snails

LAVIMIN

Premium Minerals for Molting and Growth

Shrimps are subjected to the periodical moulting cycle and hence the bio-availability of minerals for successful molting is very much essential. Due to high stocking and intensified shrimp farming practices, the supplementation of minerals is an urgent need to maintain the mineral balance in the aquatic systems. The balanced minerals place a key role for inducing the periodical moulting cycle and growth. **LAVIMIN** is a perfect blend of major and micro minerals which ensures maximum bio-availability to aquatic animal for better performance and growth.

Ingredients: Calcium, Magnesium, Phosphorus, Zinc, Selenium, Copper, Manganese, Iodine, Cobalt, Chromium, Vitamin A, Vitamin D_3,Vitamin E, B. subtilis, DL- Methionine, L-Lysine Monohydrochloride

Body Cramps, White muscle and Vitamin Deficiency

Benefits :

- Provides high bioavailability of minerals
- Minimises white muscle, body cramps, soft and loose shell problems
- Facilitates formation of exoskeleton and periodical moulting
- Promotes phytoplankton growth and water colour
- Maintains mineral balance in pond water
- Improves physiological functions and growth

Dosage: **Pond Preparation:** 15-20 kg/acre
Moulting Time: 10 kg/acre

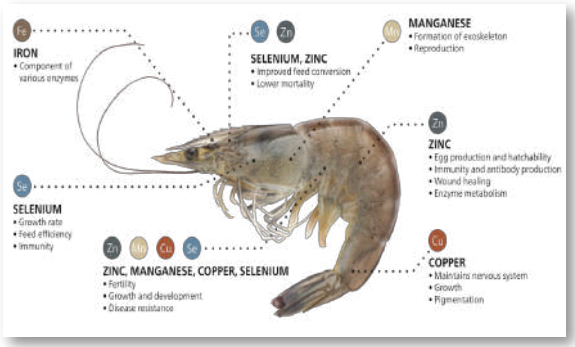
Regular Maintenance: **Shrimp:** 10-20 grams/kg feed
Fish: 8-10 kg/Ton feed OR As suggested by Aquaculture Consultant

LaviPlex Farm Pak

Organic Proteinated Trace Minerals

Minerals play a vital role in soft tissues, enzymes, some vitamins, hormones and respiratory pigments which are essential for muscle contraction and transmission of nerve impulses. Hence nutritionally complete diets are essential in aquaculture and micronutrients must be complete in sufficient levels in the prepared diets to support optimal growth, FCR, disease control and production efficiency. LaviPlex Farm Pak is a blend of organic proteinated trace minerals with Enzymes and Amino acids with fullest bio-availability.

Composition: Calcium, Magnesium, Phosphorus, Zinc, Selenium, Copper, Manganese, Selenium, Iodine, Chromium blended with Di-Calcium Phosphate and Yeast.



Benefits :

- Provides high bio-availability of minerals
- Minimises white muscle, body cramps, soft and loose shell problems
- Facilitates periodical moulting
- Maintains osmotic pressure and acid-base balance
- Improves physiological functions and growth

Dosage:

Molting Time: 3-5 kg/acre

Regular Maintenance: 10-20 grams/kg feed/day OR As suggested by Aquaculture Consultant.

LaviPlex Zinc

LaviPlex Zinc

Zinc Proteinates for Immunity and Growth

Supplementing Zinc from performance trace minerals in shrimp diets alone or in combination with other trace mineral amino acid complexes proved to be an efficient approach in promoting shrimp growth, antioxidant capacity, immune response and product quality. Zinc play a role in the detoxification process and protection against free radicals, which can cause oxidative stress, damaging cells and leading to shrimp diseases. **LaviPlex Zinc** provides Zinc in proteinated form which ensures fullest bioavailability. Zinc potentiates facilitates several metabolic and physiological functions in fish and shrimps.

Composition: Zinc Proteinate with suitable-base

Best Shrimp quality with Zinc Proteinates

Benefits :

- Improves the immunity under stress environments
- Promotes synthesis of enzymes
- Ensures formation of hormones linked to growth
- Improves FCR and pond environment

Dosage:

Pond application: 1-2 kg/acre

Moulting Time: 1 kg/acre along with Minerals

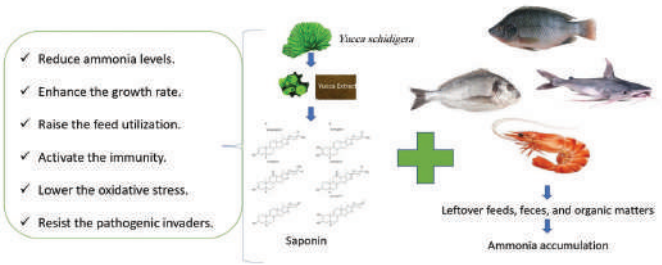
Regular Maintenance: 10-20 grams/kg feed OR As suggested by Aquaculture Consultant.

Lavi-Yucca

Reduces Toxic Gases

Yucca schidigera is rich in saponins and phenolic compounds that have antioxidant effects, with high levels of steroidal and antioxidant compounds. Yucca is applied mainly to reduce the levels of ammonia emissions in aquaculture ponds due to its content of steroidal saponin fractions, which has surface-active properties and can bind to ammonia via glycol-component fractions. The reduced levels of accumulated ammonia would result in the balance of protein metabolism in the fish body and a reduction in energy consumption. Hence, the feed utilization, growth performance, and physiological status of aquatic species can be improved using yucca. Additionally, yucca application results in the enhancement of the antioxidative, immunological, and anti-inflammatory responses in several aquatic animals. **Lavi-Yucca** has blended with plant extract of yucca, probiotics and enzymes for controlling toxic gases produced from the polluted pond beds.

Composition: *Yucca schidigera, Nitrosomonas spp., Nitrobacter spp., Thiobacillus thiophilus* and Enzymes



Benefits :

- Quickly eliminates toxic gases Ammonia, Nitrites and H2S gases
- Facilitates Nitrogen cycle and reduces the organic matter
- It improves survivability of shrimp
- Yucca acts as growth promoter as well as immunostimulant

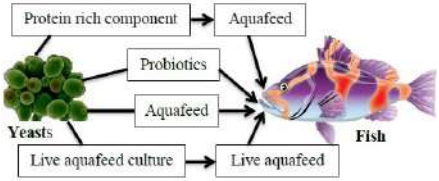
Dosage: 500 grams-1kg OR As suggested by Aquaculture Consultant

Lavi-Sac

Instant Yeast for Health and Immunity

Yeast supplements and yeast-containing feed ingredients lead to the higher protection against diseases and to the better productivity of fishes resulting in the greater growth of the aquaculture industry. Moreover, rotifers, Artemia, and copepods can be produced well as live aquafeed by application of yeasts in aquaculture. Some yeasts used in probiotic products often improve immunity of fishes as well as attempt to enhance the water quality of aquaculture resulting in good production outcomes. The potential of yeast as probiotic to improve disease resistance has been demonstrated and diets supplemented with S. cerevisiae has reduced mortality in Tilapia after intraperitoneal injection pathogenic A. hydrophila. **Lavi-Sac** has developed using quality strains of yeast and provided in micro granular form. The yeast will accrue several benefits to the fish/shrimp as well as pond environment.

Composition: *Saccharomyces boulardii, and S. cerevisiae* with 4 billion cfu/g



Benefits :

- Enhance the pond environment by improving beneficiary microbes
- It maintains balanced pH
- It accelerates the fermentation/brewing process
- Improves the gut health and nutrients absorption
- Improves FCR and growth of Shrimp

Dosage:

Pond application: 500 grams - 1 kg/acre

Fermentation/brewing: 200 grams\150 Liter

Feed application: 5-10 grams/kg feed OR As suggested by Aquaculture Consultant

Formula C

Immunity and Growth Booster

Fish lack L-gluconolactone oxidase enzyme, which is responsible for the synthesis of vitamin C, and therefore, fulfill their vitamin C requirements from an exogenous source. Hence the dietary vitamin C supplementation is reported to enhance growth and immune response in fish. **Formula C** has developed using naturally occurred phytogenic substances which are fortified with Nucleotides, Antioxidants and Trace Minerals. This product will give the best results in intensive aquaculture ponds especially during summer season.

Composition: Vit. C, Nucleotides, Antioxidants and Zinc

Benefits :

- Improves the immunity and growth
- It reduces heat stress
- Minimises white gut problems
- Optimises the bioavailability of dietary nutrients
- Improves FCR and growth

Dosage: 10-20 grams/kg feed OR As suggested by Aquaculture Consultant

Lavi-Soil C

For Natural Food Production and Waste Minimization

Controlling the inorganic Nitrogen by manipulating the Carbon/Nitrogen ratios is a potential control method for aquaculture systems. Nitrogen control is induced by feeding bacteria with carbohydrates and through the subsequent uptake of Nitrogen from the water by the synthesis of microbial proteins. The relationship among the addition of carbohydrates, the reduction of ammonium and the production of microbial proteins depends on the microbial conversion coefficient, the C/N ratio in the microbial biomass and the carbon contents of the added material. Hence an optimum C/N ratio need to maintain in the soil for improving the beneficiary microbes, zooplankton and diatom population. **Lavi-Soil C** relieves the stress on soils and refresh with all the primary nutrients require for natural food production and healthy bottom.

Composition: Organic Carbon, Nitrogen and Premix of Trace Minerals

Benefits :

- Improving natural food production and uniform water color
- Enhances the beneficiary microbial loads and decomposes feed wastages
- Stimulates the disease resistance and survivability of shrimp/fish
- Improves the FCR and growth of the shrimp/fish

Application:

- Pond Preparation: 20 kg/acre
- During the culture: 5-10 kg/week/acre OR As suggested by Aquaculture Consultant

DCP Super

For Bone Strength and Shell Tightening

Phosphorus is one of the most essential minerals for fish growth and bone mineralization which function primarily as structural component of hard tissues Eg. Bone, exoskeleton, scale and teeth. Effects of dietary phosphorus deficiency in fish have been found mainly to be loss of appetite, reduced growth, head and skeletal deformities and under extreme circumstances affect bone formation and lead to death of fish. In semi-intensive culture system the natural food alone usually may satisfy all phosphorous requirements of fish to support slow growth rate and to avoid gross phosphorous deficiency symptoms. Di-Calcium Phosphate (DCP) is rich in calcium and phosphorus two vital minerals for fish growth. Calcium and phosphorus are essential for the development of strong bones, teeth and scales in fish. In addition to this, phosphorus is also important for energy metabolism, DNA synthesis and cellular function.

Composition: Di-Calcium Phosphate fortified with Vitamins Premix and Trace minerals

Benefits :

- Facilitates moulting and muscle formation
- Improves cellular function and shell tightening
- Improves phytoplankton and uniform water colour
- Improves overall growth and performance of the animal

Application:

- For Shell thickening after moulting: 3-5 kg/acre
- For Preventing Loose shell and Soft shell: 4-6 kg/acre
- For Algal bloom development: 3-5 kg/acre

  OR As suggested by Aquaculture Consultant

Triple Star

For Bacteria and Viral Diseases

Infectious diseases like Vibriosis, Red Disease and White Spot Syndrome would causes to a major production and economic losses. Hence, an adequate treatment of water before stocking as well as while running culture would be regularly maintained in order to reduce multiplication and spread of pathogens in the culture ponds. **Triple Star** has the potential to destroy wide range of pathogens of economic importance in aquaculture farming therefore it can reduce the incidence of disease outbreak and to enhance survivability.

Composition: Pentapotassium Bis (Peroxymonosulphate) Bis (Sulphate), Sodium Alkyl Olefin Sulfonates and Sodium Chloride

Benefits :

- It kills all kinds of pathogenic bacteria, virus, fungus and protozoans
- It protects the multiplication of pathogens and spread of disease
- It is suitable for all types of hatcheries and ponds of fish and shrimp
- Best product for vibrio and red disease treatments
- Performs as a best water sanitizer for all stages of aquaculture practices

Dosage: 1kg/acre OR As suggested by Aquaculture Consultant

Schedule:

Apply during evening hours or sunlight time

Method of Application: Mix recommended dose of **Triple Star** with water and then broadcast to the pond (Keep the Aeration) OR as suggested by Aquaculture Consultant.

LaviFresh

DO Booster and Alkalinity Stabilizer

Dissolved Oxygen (DO) is the most important and critical water quality parameter because of its direct effect on the feed consumption and metabolism of shrimp as well as indirect influence on the water quality. Maintenance of adequate level of dissolved oxygen in pond water is very important to shrimp growth and survival. DO can be affected by many factors particularly water temperature, respiration of plants and animals and the level of organic matter. LaviFresh has applied for supplementation of excess dissolved oxygen and stabilises the alkalinity levels in the pond environments. LaviFresh has formulated with special Calcium Perporates.

Composition: Calcium Perporates with Boosters and Stabilizers.

Benefits :

- Quick release of Dissolved Oxygen
- Maintains the optimum Alkalinity and water color
- Supress the toxic gases like H_2S, Ammonia and Nitrites
- Lowers the shrimp stress during molting and bad weathers

Dosage:

- Moulting period: 4-5 Kg/Acre
- Heavy Algal blooms: 3-4 kg/Acre in the late night OR early morning hours
- Partial Harvest period: 4-5 kg/acre

ClinZin

ClinZin

Yucca Coated Zeolite Granules

The pond bottom often polluted with the settlement of unconsumed feed, excreta and dead aquatic animals. The degradation of waste start immediately, leading to production of noxious gases like ammonia, nitrite and hydrogen sulphide etc. These gases alters the pH and dissolved oxygen levels in the pond environment eventually retarding the growth of the shrimp/fish. The excess gas production beyond optimum levels would resulted in animal mortality/losses to the farmers. **ClinZin** has formulated with the combination of premium zeolite and yucca schidigera from natural sources. The product serves as soil conditioner and removes the unwanted toxic gases like ammonia, hydrogen sulphide, nitrites and sludge at the pond bottom. The product may be used during the culture for maintaining the healthy pond bed and ecosystem.

Composition: Zeolite granules and *Yucca schidigera*

Benefits :

- Removes ammonia, nitrite, hydrogen sulphide and other bottom toxic gases
- Improves the plankton growth and pond colour
- It helps to decompose waste sediments accumulated in the pond bottom
- It absorbs the bad odour released in the pond bottom
- Water quality and optimum pH levels can be maintained

Application: 5kg-10 kg/acre or as advised by your aquaculture consultant

SEL-PAK

Organic Selenium for Viral Immunity

SEL-PAK will promote the growth performance, biochemical components, digestive enzymes activities and the anti-oxidative status in Shrimps. Dietary supplementation of selenium would also facilitates gut microbiota, and molecular responses of the Pacific white shrimp; *Litopenaeus vannamei.*

Composition: Organic Selenium with Yeast Derivatives

Quality of Shrimp

Benefits :

- It provides resistance against viral diseases
- It prevents cellular damage from free radicals
- It gives strength to the animal during pollution/toxic gases
- It improves the immunity and cellular activity
- It facilitates the growth and survivability

Dosage: 5-10 g/kg of feed OR As suggested by Aquaculture Consultant.

Sukrena Power

Perfect Disinfectant for all Viral and Bacterial infections

Aquaculture ponds accumulate soil particles eroded from earthwork and organic matter originating from dead plankton, uneaten feed and faeces. It is common in intensive shrimp culture to clean pond bottoms after each crop. **Sukrena Power** plays a key role for minimising the disease outbreak and spreads and act as perfect disinfectant for all kind of viral and bacterial diseases.

Composition: Didecyldimethyl Ammonium Chloride with suitable base

Benefits :

- It induces moulting in shrimps in a faster and safer manner
- It controls bacterial, fungal, algal disease and certain protozoans like Zoothamnium
- It efficiently eliminates toxic algae like dinoflagellates and blue green algae
- Promote good water quality, inhabit algae growth and kills fungus
- Useful to control gill disease
- It De-Odourises and purifies pond water

Application: 2-4 Litre/Acre OR As suggested by the Aquaculture Consultant

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