

**Splendid
25 Years
1999**

**FARMING WITH
PROFITS**

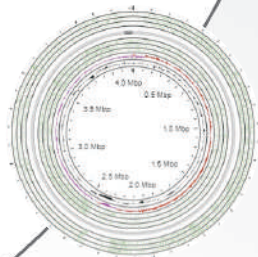
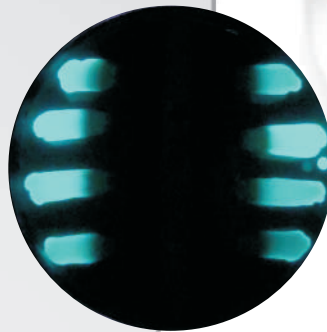
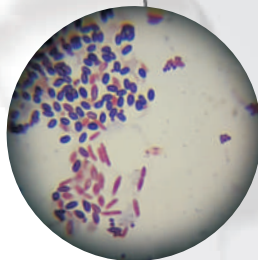
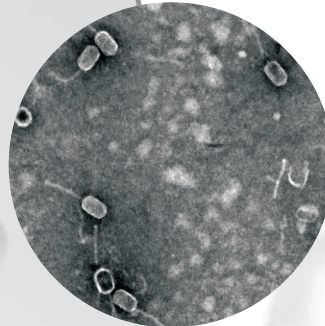
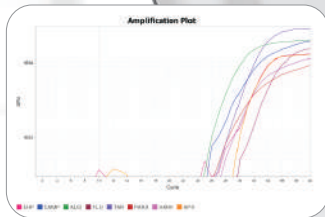
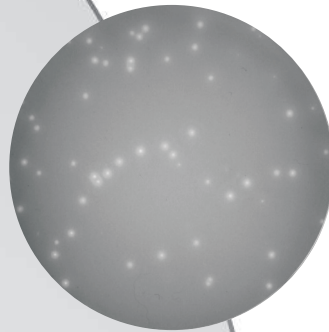
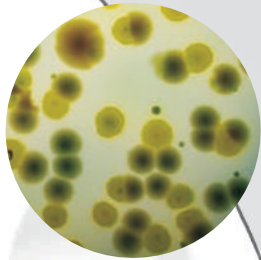
**Promoting
Safe Sustainable
Zero-Residue
Shrimp Farming**



SALEM MICROBES PRIVATE LIMITED







WE MAKE A DIFFERENCE

Salem Microbes established in 1999, has gone through an Odyssey in Animal Health sector in its pursuit to stick to its commitment to Nature. We are well ahead of our peers in designing and developing microbial solutions in Indian and International Animal health industry.

With our experience in working in different food animals and diverse farming practices, our team of scientists and salesmen have gained immense knowledge and understanding to fulfil local and global food standards.

OUR AQUACULTURE EXPERTISE

Aquaculture farming practices, water quality and ecology vary from region to region. We have developed capabilities to design and develop products to work effectively on the target population, either it's a Hatchery, Nursery or Grow out with Customization as our strength.

Salem Microbes has developed facilities and expertise to develop products and solutions. Our efforts are supported by a well-established in-house R&D facility from Screening, Genetic sequencing, Bioinformatics capabilities for Probiotics, Pathogens, Bacteriophages, Bacteriocins and infrastructure to conduct efficiency studies as well. We are well positioned with scaled up production facility to supply farmers and B2B enterprises around the globe.

AQUA EXPO 2023 GUAYAQUIL



MSME DEPARTMENT
GOVERNMENT OF TAMILNADU
Honourable Chief Minister's Award

THE BEST ENTREPRENEUR M/s.SALEM MICROBES PRIVATE LIMITED

Salem District 2017 -18

Tuesday 23rd February, 2021.

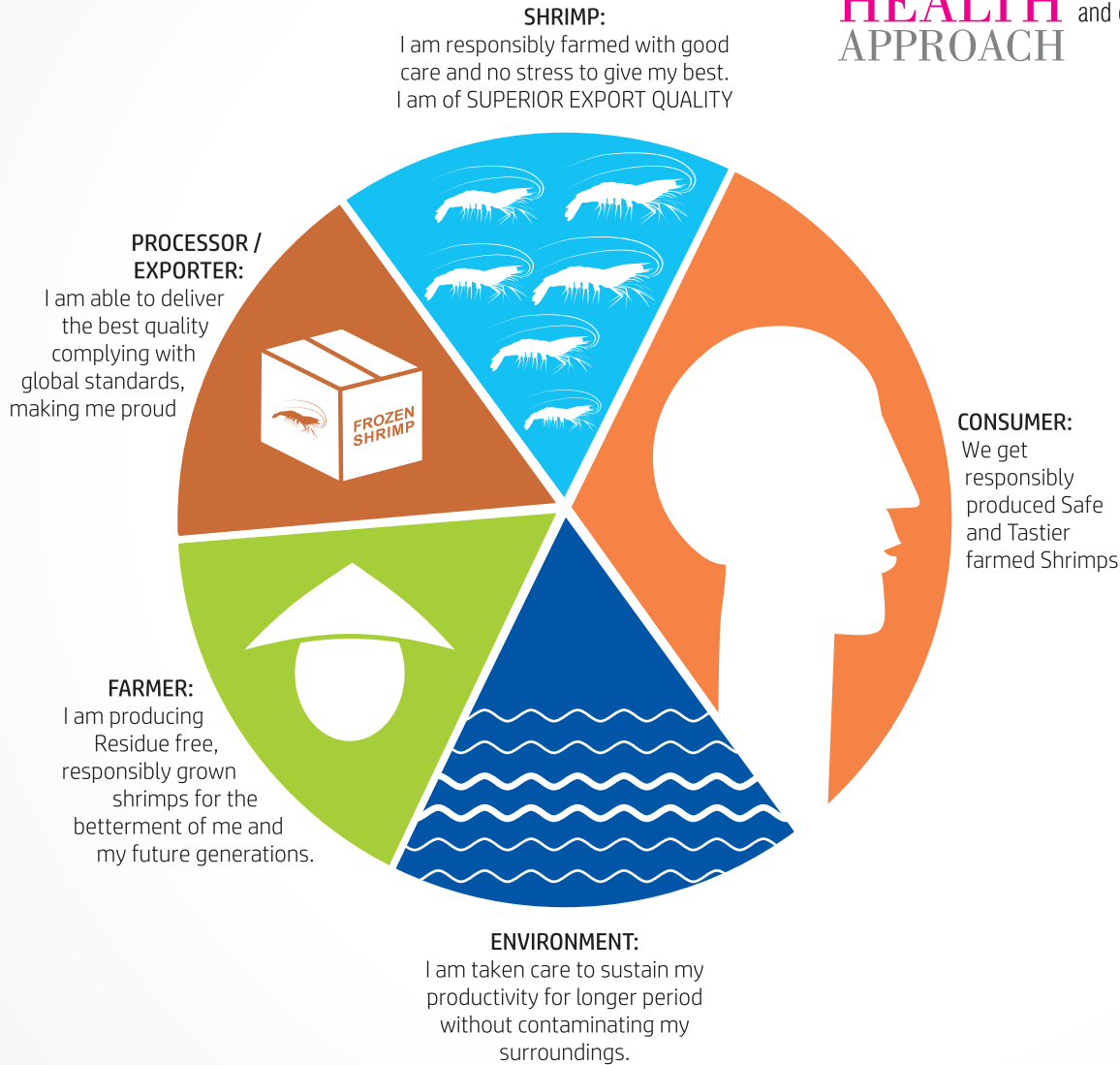
The Honourable Chief Minister's Award for the Best Entrepreneur from the MSME Department, Ministry of Rural Industries, at District Level for the year 2017-2018 was presented to M/s.SALEM MICROBES PRIVATE LIMITED SALEM by the Respectable District Collector Mr.C.A.Raman.I.A.S. in the presence of the Project Director, DRDA, Mr.N.AruJothi Arasan and the General Manager, District Industries Centre, Mr.D.Sivakumar.

Mr.D.RameshKumar, Managing Director and Mr.D.Vijayanand, Director, Salem Microbes Private Limited received the Award on behalf of the Company.



ONE HEALTH APPROACH

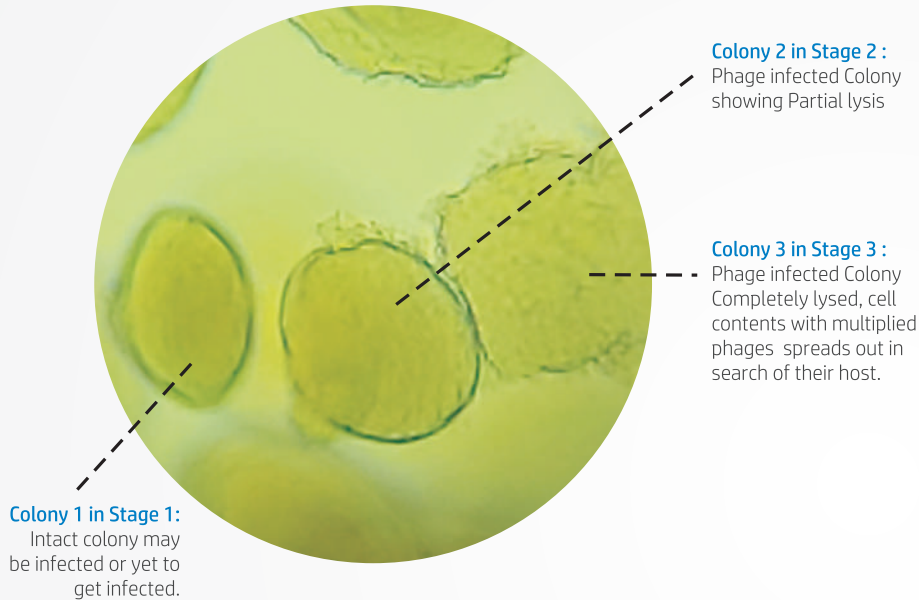
One Health unified approach for balanced welfare of people, animals and ecosystems.



Salem Microbes has set its vision to design and develop all its present and future innovations to go in tandem with SDGs relevant to aquaculture and its environment.



3 Different stages of Vibrio Colonies infected with V PHAGES and Progressive Lysis observed on an Agar Plate - Under Stereo Microscope



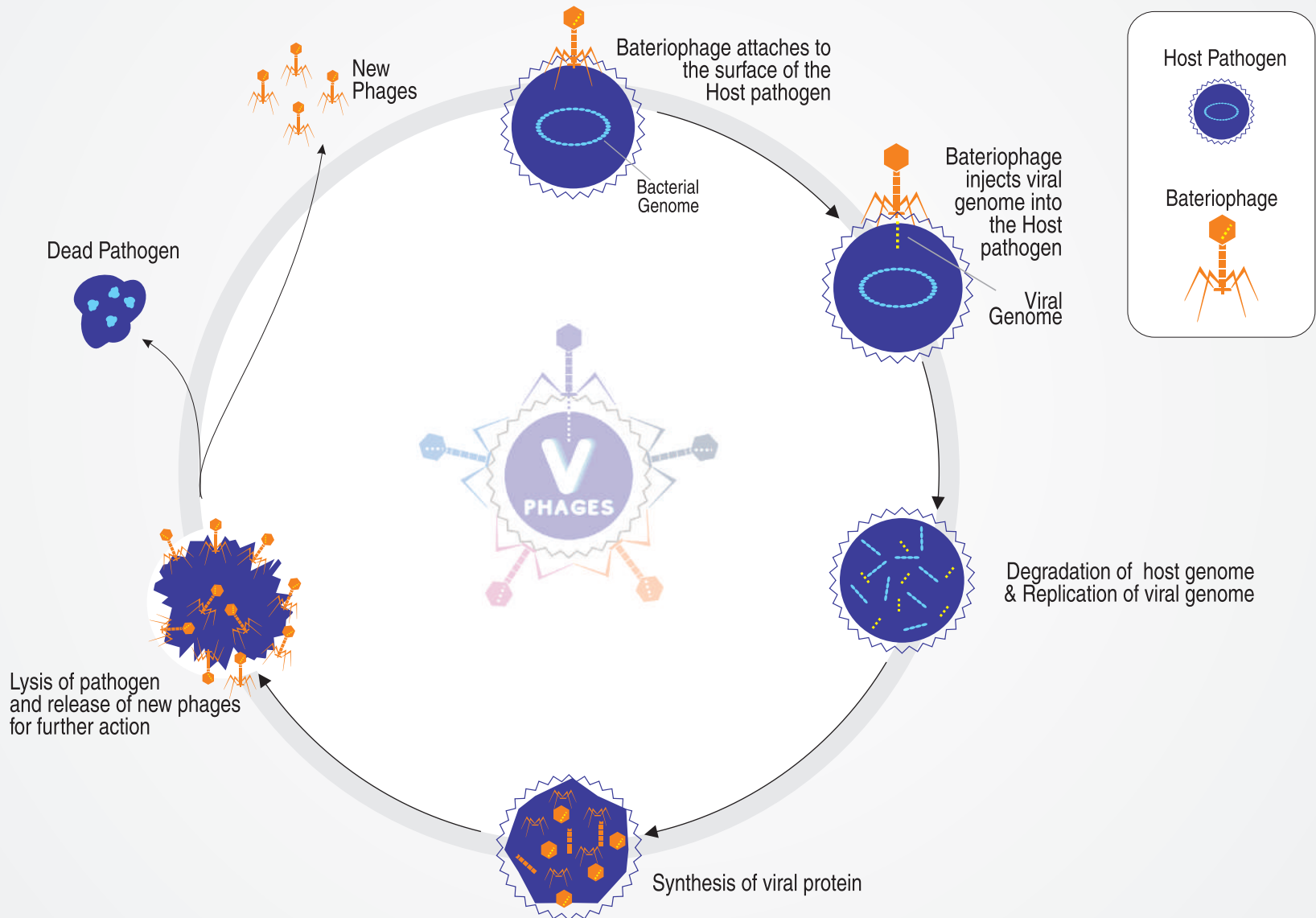
The emergence of highly virulent pathogens in aquaculture, necessitates the need for highly effective therapeutic product which can reduce usage of sanitisers and antimicrobials. Continuous use of sanitisers and antimicrobials lead to damage of microbiome (the normal non-pathogenic beneficial bacteria) in aquaculture pond ecosystem and shrimp gut.

Recent explosion of scientific research has brought to light the importance of maintaining good and unfluctuating microbiome in shrimp and fish health and aquaculture success. Under this condition Bacteriophages against virulent pathogens in aquaculture will be highly helpful in maintaining the natural ecosystem of the pond while killing the aquaculture pathogens.

What is a Phage? How does it works?

Bacteriophages are Viruses of bacteria which enter the bacteria, use the bacterial source of energy, hijack the bacteria, multiply inside the bacteria and kill them by lysis. When they kill the bacteria, each virus which enter the bacteria multiplies and releases 10 to 100 mature ready-to-attack bacteriophages which are capable of infecting and destroying next set of target pathogenic bacteria.

ILLUSTRATION OF ACTION OF PHAGE ON A TARGET BACTERIA



Phages and Probiotics, a Synergistic combination.

Probiotics have played an undeniable role in the environmental management of the shrimp pond and are going to continue to sustain the shrimp ecosystem microbiome, the only catch here is use of quality probiotic inputs which farm owners and technical experts should be aware of.

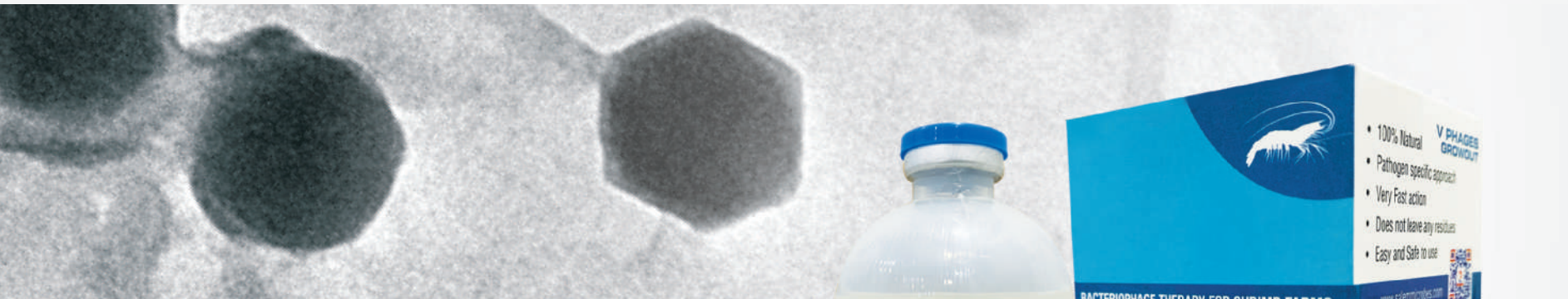
Probiotics reduce the chances of infection by Competitive Exclusion, but once the critical levels of Vibrio species dominate the environment, it become nearly impossible for probiotic bacteria to exclude Vibrio species. Such critical condition demands quick and sure shot treatment, which is non residual in nature and non-GMO and which does not affect the microbiome. Here comes the concept of Phage Therapy which is highly specific and quick acting in nature specifically targeting the aquaculture pathogens.

Salient Features	Probiotics Application only	Bacteriophage Application only	Both Bacteriophages & Probiotics applied condition
Mode of action	Competitive exclusion of pathogens by exhausting nutrients for the pathogens.	Works on identified targeted pathogens by killing them by lysis.	Phages Eradicates Identified pathogens. There by nutrients are available for probiotic microbes.
How it manages pathogens ?	Dominates Pathogens but when conditions are conducive for pathogens, they cause disease	Eradicates pathogens thereby reduces frequency of disease.	Probiotics have a conducive environment to multiply fast.
	Long acting	Self-limiting	Phages keeps check on fresh entrants
Residual formation	No Residues	No Residues	Phages leaves un-identified Natural Probiotic flora to thrive better
How they really work?	Bacteriocin & Enzymatic action	Cell Lysis of Pathogenic bacteria.	Phages prevents horizontal transmission of toxin bearing plasmids.
Source	Non-GMO, Nature isolates	Non-GMO, Nature isolates	
Traceability and proprietary nature	Identified & Genotyping done	Identified & Genotyping done	
Is Product Upgradation possible?	Continuous Improvement in Performance based on the new strains introduced.	Continuous update of Phages for New Identified Pathogens makes it a safe therapeutic product with broad spectrum of action.	
Limitations	Virulent pathogens with Toxins continue to exist, multiply and cause infections.	Virulent pathogens with toxins are destroyed, thus halting their propagation.	

BACTERIOPHAGE THERAPY FOR SHRIMP FARMS

V PHAGES GROWOUT™
EFFECTIVE ON SUPERBUGS

V PHAGES GROWOUT cocktail contains lytic phages, acting specifically against aquaculture pathogens selected from various environment. Phage cocktails are continuously upgraded to maintain the broad spectrum, pathogen specificity and infectivity. All our bacteriophages are Genotypical characterized to ensure proprietary formulation and traceability.



"V PHAGES GROWOUT" targets against most common pathogenic *Vibrio* species

- *Vibrio parahaemolyticus*
- *Vibrio alginolyticus*
- *Vibrio harveyi*
- *Vibrio campbellii* and other pathogenic *Vibrio* sp.

SALIENT FEATURES

- 100 % Natural
- Pathogen specific approach
- Very Fast action
- Easy & Safe to use
- Enhances Probiotic performance
- Does not leave any residues



CAA/MAR2023/PRO/04631

CONTENTS: Lytic Bacteriophage of total 10^{10} PFU/ML

(PFU - Plaque Forming Units)

BENEFITS:

- Effective against Vibriosis, other Bacterial Infections and Running Mortality Syndrome (RMS)
- Effectively prevents Gut Infections and Improves feeding
- Prevents sudden crop loss and extends Life of Pond during critical profit-making period
- Enhances probiotic performance

Works as an Alternative to Antibiotics and complies with International Seafood export regulations.

CONDITIONS & USAGE RECOMMENDATIONS:

VIBRIOSIS



Use immediately when various symptoms of Vibriosis as Luminescence in water, infections in Shrimp and or Low feed intake etc., correlated with by lab test.

WHITE FECAL DISEASE



Use immediately on observation of few strands on White fecal matter floating on water, or on check tray. Start treatment.

WHITE GUT DISEASE



Use immediately on observation of few shrimps with White Gut, in check tray or sampling net. If more than 5 days of White Gut Disease is reported, there is high chance of spread in soil and water and so treatment takes time to respond.

RUNNING MORTALITY SYNDROME



Use immediately on observation of dead pieces which is normally more than the regular Natural dead pieces observed in that pond on a daily basis. This will first control RMS due to VIBRIOSIS within 3 days and then reduce.

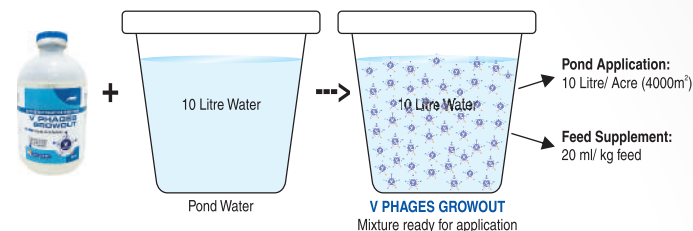
DOSE:

Preparation of "V PHAGES GROWOUT Mixture" for Pond application:

Add 100 ml of V PHAGES GROWOUT to 10 litre of Pond water, to which it has to be applied. Fully utilize the diluted product mixture and do not store for later use.

Preparation of V PHAGES GROWOUT Mixture as Feed Supplement:

Add 100 ml of V PHAGES GROWOUT to 10 litre of Pond water. Use 20 ml of "V PHAGES GROWOUT Mixture" for 1 kg feed. Spray using a sprayer over the feed, shade dry for 20 minutes and use.



USAGE INSTRUCTIONS:

I. PREVENTIVE DOSE:

Pond Application:

For 1 Acre (4000 m²) Pond, before stocking after pond preparation, make 10 litre of "V PHAGES GROWOUT Mixture" and broadcast throughout the pond area. Repeat every 25 days, to keep infections under control.

During stocking:

Use "V PHAGES GROWOUT Mixture" as feed supplement in all feeds for first 7 days at 20 ml per kg of feed.

Feed Supplement:

To make sure of "V PHAGES GROWOUT" to reach the shrimp gut, some farmers prefer feed supplements rather than pond application. In such case, Use "V PHAGES GROWOUT Mixture" as Feed supplement in 2 feeds per day for 5 days at 20ml / kg feed. Repeat every 25 days, to keep infections under control.

II. TREATMENT DOSE:

During mild to moderate symptoms of Vibriosis, concluded either by physical appearance, animal behavior and/or by water microbiology, a treatment regime recommended is: Pond Application and Feed Supplement at the same time, to Hit the Causative agent by more than one approach and get quick results, thereby saving the shrimps.

Pond Application:

For 1 Acre (4000 m²) pond, make 10 litre of "V PHAGES GROWOUT Mixture" and broadcast throughout the pond area. Apply on Day 1, 3 and 5, to control infections.

Feed Supplement:

Use "V PHAGES GROWOUT Mixture" as Feed supplement in 2 feeds per day for 5 days at 20 ml per kg of feed.

FEED PROBIOTIC FOR GUT HEALTH

Nasci Biome™

Nasci Biome contents are natural isolates selected for superior probiotic traits acting against obligate and opportunistic pathogens prevailing under current circumstances in shrimp culture. These marine isolates have the ability to colonize the gut of *Penaeus monodon* and *Litopenaeus vannamei* and secrete metabolites acting against gram negative pathogens thereby decreasing the pathogen load of the gut. This favorably helps in the establishment of natural flora of the shrimp making its intestine healthy. Thus Nasci Biome proprietary formulation helps in the reduction of pathogen domination and re-establishment of the native microbial population ensuring microbial harmony in the Shrimp Gut.

CONTENTS: CFU/KG

<i>Bacillus pacificus</i> SMPL 701	6.00×10^{11}
<i>Bacillus stercoris</i> SMPL 704	6.00×10^{11}
<i>Bacillus inaquasorum</i> SMPL 707	6.00×10^{11}
<i>Bacillus species</i> SMPL 740	1.20×10^{11}
<i>Bacillus species</i> SMPL 741	8.00×10^{10}

COUNT: A minimum of 2×10^{12} CFU/KG



CAA/NOV2023/PRO/05452



BENEFITS

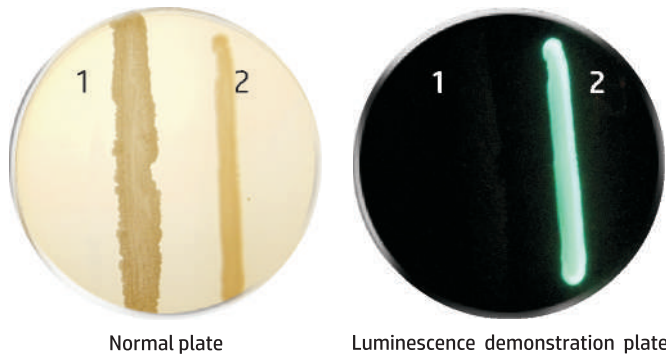
- Helps establishment of native flora of the shrimp gut.
- High implantation in gut villi.
- Vigorous Competition with Gram negatives for resources.
- Reduces the infection capability of pathogens.
- Breaks the biofilms of pathogenic *Vibrio* spp.
- Controls Bioluminescent *Vibrio* spp.

DOSE

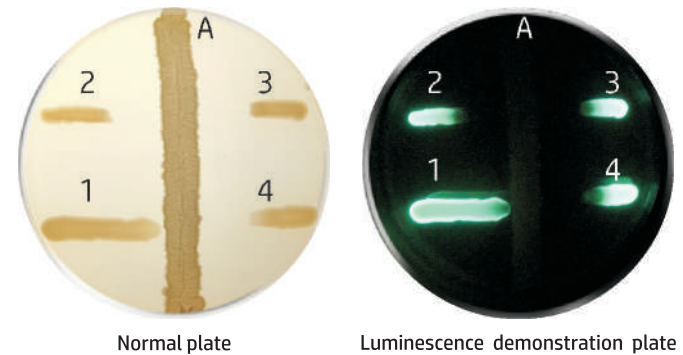
Recommended as a Feed supplement for effective protection of gut from pathogen occupation.

- Dose : 10 g of Nasci Biome per kg feed, twice a day
- Use with a binder, shade dry for 15 minutes, and use.

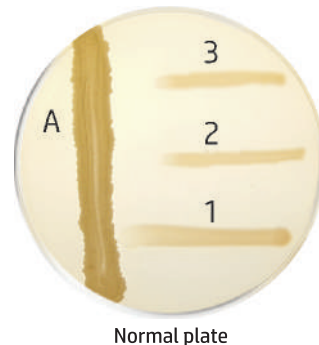
Bioluminescence inhibition demonstration by Nasci Biome™ strains against *Vibrio* isolates :



- 1 - Non luminescent Nasci Biome Probiotic bacteria
2 - Luminescent *Vibrio* species



- Demonstration of growth inhibition by Nasci Biome Probiotic Bacteria (A)
In Normal Plate and Luminescence demonstration plate
1 – *Vibrio* strain not inhibited by Nasci Biome Probiotic (A)
2,3,4 – *Vibrio* strains inhibited by Nasci Biome Probiotic (A)



- Demonstration of growth inhibition of
Non luminescent *Vibrio* species by Nasci Biome Probiotic Bacteria (A)
1 – *Vibrio* strain not inhibited by Nasci Biome Probiotic (A)
2,3 – *Vibrio* strains inhibited by Nasci Biome Probiotic (A)

SOIL BIOREMEDIATION

TOPSOIL™

TOPSOIL is a Novel probiotic approach for Cleaning and Preparing the soil to be ready for a Fresh Crop. Generally the soil in the Pond bottom gets deposited with organic matter and biofilms during the culture period. These accumulated debris form the centre of pollution for producing toxic gases as Ammonia, H₂S and also act as Multiplication centre for pathogenic bacteria. The regular use of Soil probiotics gives some relief to this menace. But 100% removal is not possible and some amount remain in the soil surface and sub-surface even after draining the pond after harvest. In Nursey and Grow out ponds with Liners, this entrapped gases becomes a big problem. This accumulated debris can be effectively treated by TOPSOIL. The Waste degrading and Toxic gas removing bacteria in TOPSOIL acts on the sludge and slime, liberate the toxic gases, and degrade the organic matter into Non Toxic, Soil friendly particles which later acts as a Nutrient source for Bloom development during Pond preparation.



CONTENTS:

- *Bacillus subtilis*
- *Bacillus amyloliquefaciens*
- *Rhodobacter sp.*
- *Rhodococcus sp.*

BENEFITS:

- Degrades sludge and slime in the pond bottom
- Removes Biofilm from soil surface
- Liberates Toxic gases from sub soil surfaces
- Converts Toxic sludge into Nutrient source for Planktons
- Preserves Soil surface

COUNT:

A minimum of
2 x 10¹² CFU / KG

CAA/JAN22/PRO/03760

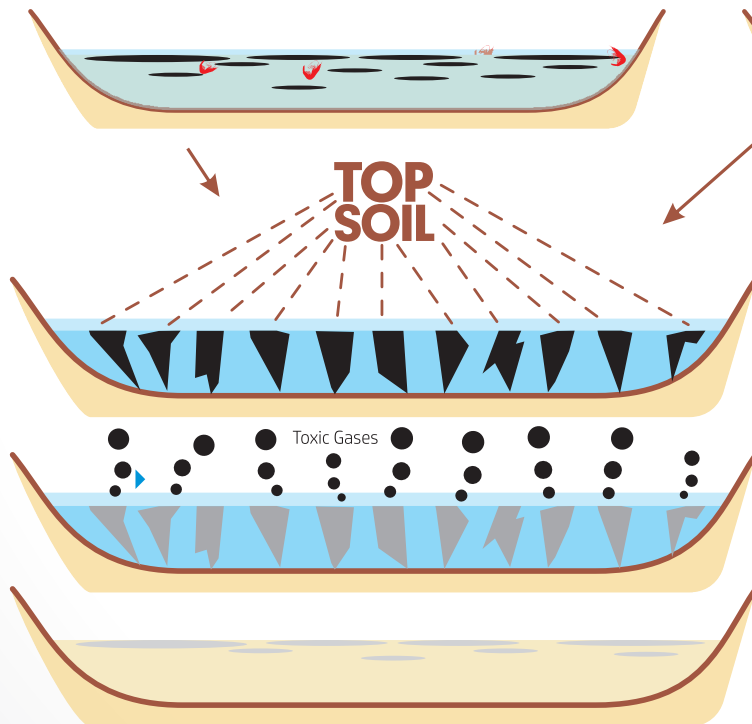


- DOSE:**
- Immediately after Harvest: 1 KG/acre
 - During Pond Preparation : 1 KG/ acre

Usage Recommendations: TOPSOIL can be used in 2 different approaches as (1) Immediately after Harvest and (2) During Pond preparation.

1) IMMEDIATELY AFTER HARVEST

Pond bottom is full of organic sludge after harvest. It will also be wet. This is a right time to Treat, Reduce and Remove the Toxic sludge and gases from the soil.



2) DURING POND PREPARATION

After the end of a crop, many times ponds are left for drying without removal of sludge. Even after the scrapping and ploughing is done, some amount of black soil and sludge remain below the soil surface or goes deep below. This becomes the source of toxic gases for the new crop. **TOPSOIL** helps to reduce this sludge and remove the toxic gases.

- ▶ **Step (1):** Fill half to one foot water in the pond bottom surface. Mix 1- 2 Kg of **TOPSOIL** in 100 liters of water and sprinkle over the bottom on the water-soil surface. If possible chain drag to mix the content well with the subsoil debris. Leave it for 3 days.
- ▶ **Step (2):** Liberation of Toxic Gases from the **TOPSOIL** applied wet soil surface
- ▶ **Step (3):** You can observe remarkable colour change from Black soil to Grey/Brown soil due to organic degradation. Drain the water out and start pond preparation.

**AQUACULTURE PROBIOTIC
DURING SEEDSTOCKING & CULTURE
SUPER CONCENTRATED-READY TO USE**

SeedOne™ Growout

SeedOne Growout is an instantly soluble, super-concentrated probiotic blend for use in Aquaculture. The selected strains of SeedOne Growout has high liveability, adapts faster to a wide range of salinities and acts instantaneously as activation by brewing is NOT required. SeedOne Growout is recommended for use in Pond preparation, During Stocking and Culture period to defend various stages of Pathogenic invasions.

CONTENTS:

Bacillus subtilis
Bacillus licheniformis
Bacillus stercoris
Bacillus amyloliquefaciens

BENEFITS:

- Seeds Water with beneficial Bacteria
- Increases Survival of seeds
- Removes Bacterial Bioluminescence by Vibrio spp.
- Provides faster start-ups
- Degrades Waste and Removes slime
- Ensures Better Water Quality
- Improves Gut health and Disease resistance

COUNT: A minimum of 5×10^{12} CFU/KG

DOSE: Before and after stocking : 1 KG / Acre During Culture: 200 G / Acre



CAA/F16/PRO/00173



Probiotic for
POND WATER MANAGEMENT & DISEASE PREVENTION

BAC CHECK™



CAA/F16/PRO/00171

BAC CHECK is a consortium of naturally occurring inhabitants of the pond, selected for their superior probiotic and bio-degrading features. These strains are equally capable of working under diverse osmolarity and temperatures.

BAC CHECK is recommended to combat the ill effects of the opportunistic pathogens when the natural defense mechanisms of the cultured species are suppressed.

CONTENTS:

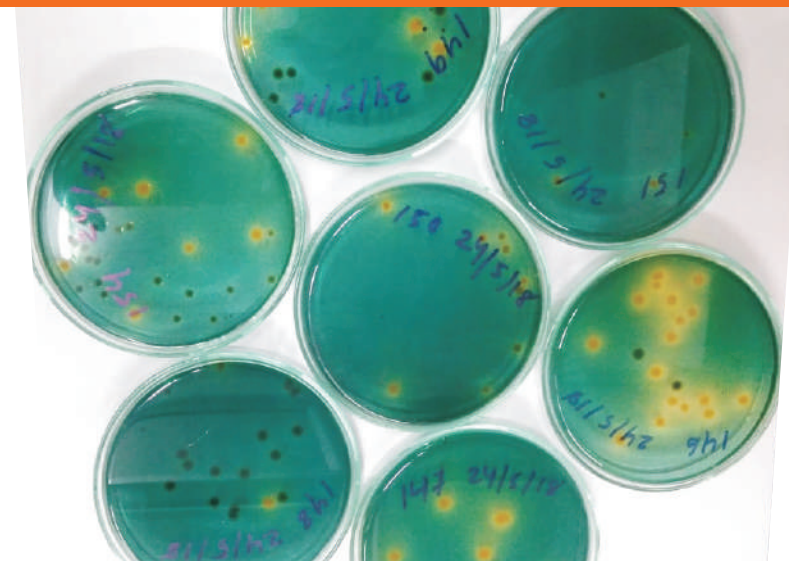
Bacillus subtilis
Bacillus licheniformis
Bacillus laterosporus
Bacillus amyloliquefaciens
Bacillus megaterium

BENEFITS:

- Introduces healthy probiotic bacteria to improve survival on stocking
- Prevents bacterial bioluminescence and vibrio infections
- Breakdowns organic matter and keep water clean
- Promotes probiotic bacterial flocs and Natural immunity

COUNT : A minimum of 2×10^{12} CFU / KG

DOSE: Pond Preparation: 2 KG / Acre **During Culture:** 1 KG / Acre



HYDROGEN SULPHIDE DESTROYER

TOX BEAT™

TOXBEAT is a blend of selected strains of microorganisms to overcome the problems faced by evolution of Hydrogen Sulphide gas from pond bottom, Black soil formation, Foul odor (Rotten Egg Smell) on Water and shrimps and excess blooming. TOXBEAT with its Anaerobic and Aerobic combination oxidizes Hydrogen Sulphide and utilizes Nitrate to combat their negative effects. This effectively controls and also reduces Over blooming. The Rotten Egg smell developed from the black soil slowly gets eliminated and restores the Pond Water Quality to the desirable level. TOXBEAT stops Shrimp mortality and progressively increases feed intake to the expected quantity.

CONTENTS:

Bacillus subtilis
Bacillus amyloliquefaciens
Bacillus thuringiensis
Thiobacillus denitrificans
Bacillus inaquasorum

COUNT : 5×10^{12} CFU/KG

DOSE : Regular Preventive dose : 1 KG / Acre Black soil condition : 2-3 KG / Acre by mixing with sand and applying in the area of black soil formation

BENEFITS:

- Mitigates H₂S Toxicity
- Prevents Blacksoil formation
- Reduces toxic sludge buildup
- Stabilises pH
- Depollutes and cleans pond bottom
- Improves overall Water Quality



CAA/F16/PRO/00172



BLACK SOIL BEFORE TREATMENT



BLACK SOIL AFTER TREATMENT

POND PROBIOTIC

Macro PS

Settlement of uneaten feed, dead algae, exoskeleton and excreta in the pond bottom need special attention to keep them in check.

Addition of waste eating bacteria in Macro PS, helps to keep the pond parameters under optimum range so that the survival and growth of animal is improved.



CONTENTS:

Bacillus subtilis
Bacillus amyloliquefaciens
Rhodobacter spp.

COUNT:

A minimum of 4×10^8 CFU/ml

DOSE : 5 ltr / Acre

BENEFITS:

- Establishes favorable phyto and zoo plankton
- Degrades waste and maintains clean pond bottom
- Removes Black soil and mal-odour
- Clarifies water column and improves water quality.
- Control ammonia and toxins

CAA/F16/PRO/00180

AMMONIA AND ODOUR CONTROL FOR AQUACULTURE

YUKA

NITRITE REDUCER

Yuka with Nitrite Reducer is a liquid blend of selected Plant extracts and Fermentation products to combat the ill effects of ammonia and noxious gases, affecting the Aquaculture systems.

CONTENTS: *Bacillus sp.* *Nitrobacter sp.* *Nitrosomonas sp.*

COUNT: A minimum of 3×10^{12} CFU / L

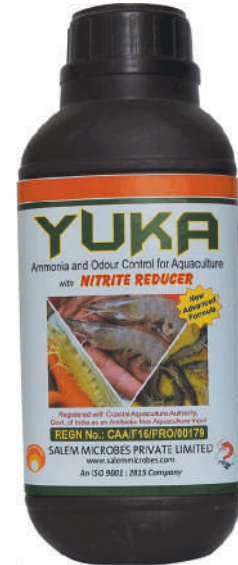
BENEFITS:

- Removes Ammonia and Nitrite from the Pond
- Relieves the shrimps from ammonia stress
- Prevents further formation of ammonia
- Neutralizes the off-flavor, mal-odour and creates friendly environment
- Increases the feed intake by decreasing the nitrite toxicity
- Works both in Water column and Soil bottom

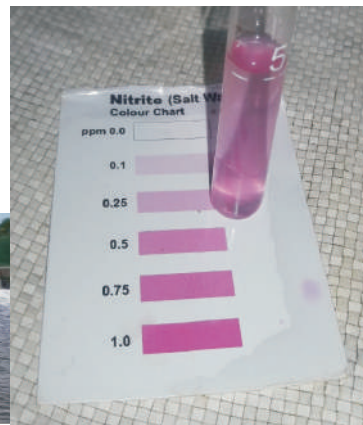
DOSE:

For Maintaining Optimum Ammonia & Nitrite levels :
1 Ltr. / Acre of pond area of 1-meter depth, every 5 day.

During High Level of Ammonia & Nitrite :
2 - 3 Ltr. / Acre, every alternate day until problem reduces to manageable levels.



CAA/F16/PRO/00178



AMMONIA CONTROL

B-YUKA 30



CAA/F16/FA/00178

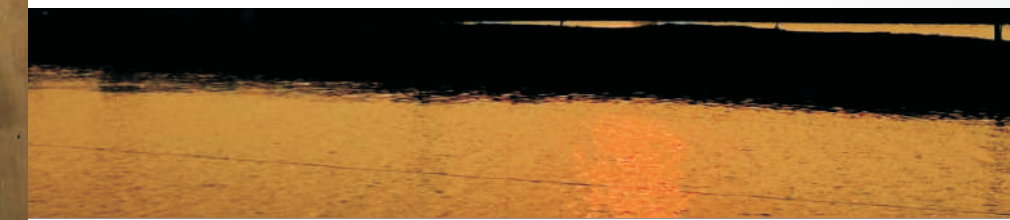
B-YUKA 30 is the spray dried extract of the Mohave Yucca plant, *Yucca schidigera*. Concentrated to 30 percent yucca actives, B-YUKA 30 is a high quality, easily blended powder. For use with animal feed stocks, *Yucca schidigera* has been shown to help reduce noxious odors and overall levels of ammonia by inhibiting Urease Enzyme and binding the free ammonia present in the environment.

CONTENTS: *Yucca Extra*, *Methane Caroxylic acid* and *plant root extract*

BENEFITS:

- Immediately binds the preformed ammonia
- Prevents further production of ammonia
- Neutralizes off flavor of ammonia and reduces the stress in shrimps
- Suitable for emergency treatment

DOSE: 500 – 1000 g / acre by mixing it with sand and sprinkling over the pond. Application can be repeated once in 15 days up to 90 days of culture and once in 10 days after 90 days of culture.



Organic Feed Enhancer NON-ANTIBIOTIC GROWTH PROMOTER

INTAKE

INTAKE is a synergistic combination of Organic acids, Essential Oils, Antioxidants and Prebiotics to ensure specialised condition for Better Feed digestion, absorption and assimilation. INTAKE contributes immensely for a pathogen free Gastrointestinal tract to ensure steady growth and development of the Shrimps.

CONTENTS:

A proprietary blend of Organic acids, Essential oils, Antioxidants and Prebiotics.

BENEFITS:

- Reduces Gut pH
- Inhibits growth of pathogenic bacteria
- Encourages growth of Probiotic microflora
- Increases Enzyme secretion
- Improves fat and protein digestion
- Prevents Gut infections as white fecal diseases
- Attractive flavour to increase feed Intake

DOSE:

- **To Improve Feed Intake:** Add 10 g of INTAKE / KG of Feed. Ensure that it is added in at least 2 feed schedules a day, to maintain a healthy stock.
- **During Periods of Stress as Improper digestion :** Apply 20 G / KG of feed in all feed schedules continuously for 7 Days.



CAA/F16/FA/00177



MULTI VITAMINS - MINERALS **AMINO ACIDS**
PHYTO NUTRIENTS **POWERFUL FEED ATTRACTANT**

AQUA ONE

AQUA ONE is the latest generation All in One feed supplement for Aqua Culture. The right combination of 46 + vital ingredients as Vitamins, Minerals, Amino acids and Phytonutrients give all round support and strength for the animal throughout its life cycle to overcome stress during Growth, Moulting, Change in Water quality, Fluctuations in Temperature, Injury and Infections.

COMPOSITION : Vitamins, Minerals, Amino Acids & Phytonutrients

BENEFITS:

- 46 Vital Ingredients
- Supports Shell Development
- Strengthens to overcome stress
- Increases feed intake
- New Attractant Flavor
- Ensures regular molting

DOSE : 20 ml / KG of feed, in one feed schedule daily. Shade dry and Broadcast.



CAA/JUN 18 /FA/01822



Mineral Mixture For Aquaculture

Growup

GROWUP is a blend of all essential minerals in bio-available forms. Vital functions in shrimp development as skeletal structure formation, osmoregulations, enzymatic activities, immune defense mechanism and metabolic functions are dependent on trace minerals which are supplemented with GROWUP. It provides essential minerals and ions such as magnesium, calcium, potassium, phosphorus, chloride and sulphate into the pond water for shrimp and fish to absorb directly into their body.

CONTENTS: Calcium, Iron, Sulphates, Chlorides, Manganese, Zinc, Copper, Cobalt, Magnesium, Sodium, Potassium.

BENEFITS:

- Pre-stocking application gives higher survival of post larvae
- Enhances phytoplankton and Natural food in pond water
- Improves Bloom quality
- Regulates pH, Acid-base balance and osmoregulation in the animal system
- Favourably alters enzymic and hormonal functions
- Ensures complete shell formation thereby avoiding soft shell diseases
- Strengthens body mass and increases gut absorptions
- Increases FCR, Growth and Survival

DOSE:

To maintain mineral balance: 10-20 KG per hectare every week.

For Loose Shell problem: 15-25 KG per hectare.

To Promote Phytoplankton and Good bloom: 20-30 KG per Hectare during pond preparation or after bloom crash.



CAA/F16/FA/00183



Minerals, Vitamins and Amino acids for Shrimp Culture

SALMIN

SALMIN contains Macro and Micronutrients which are favourable to build the disease resistance and immune response. SALMIN provides mineral mixtures which are easily digestible by Shrimps and Fishes. The available form of essential nutrients in SALMIN improves digestion, absorption leading to faster growth rate and high weight gain. SALMIN optimizes FCR and maximises productivity. SALMIN ensures development of perfect endo and exo-skeletal system of Shrimps and Fishes. SALMIN provides sufficient nutrients that support the development of plankton. SALMIN also provides essential amino acids which helps in protein synthesis.

CONTENTS: Minerals, Vitamins and Essential Amino Acids

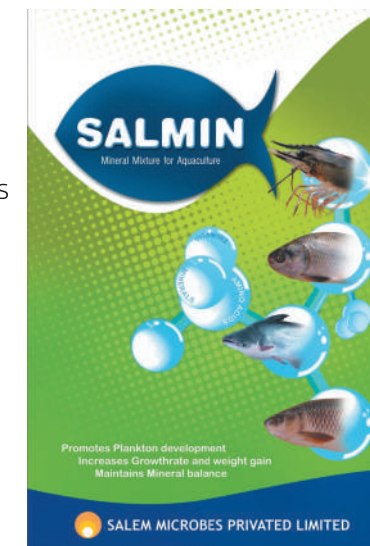
BENEFITS:

- Promotes Plankton Growth in Pond
- Maintains Mineral balance in Pond Bottom and water
- Helps in Molting and formation of Exoskeleton
- Provides all essential minerals and vitamins lost due to overflow
- Ensures Uniform Growth
- Controls the development of Blue Green Algae and other Filamentous forms
- Reduces the frequency of Water Exchange

DOSE:

During Pond preparation: 20 KG / Acre

During Culture: 20 KG / Acre once in every 30 days to provide a Nutrient Balance in pond water.



CAA/JUN18/FA/01835



NUTRITION FOR AQUACULTURE

BUILDUP

NUTRITION FOR AQUACULTURE

BUILDUP is a special combination of Nutrients as micro and macro minerals, vitamins and amino acids for Aquaculture use. These Nutrients when used helps in establishing a favorable environment for development of Phytoplankton and Zooplankton and maintain the mineral balance in ponds.

CONTENTS: Essential minerals and ions such as Magnesium, Calcium, Potassium, Phosphorus, Chloride and Sulphate.

BENEFITS:

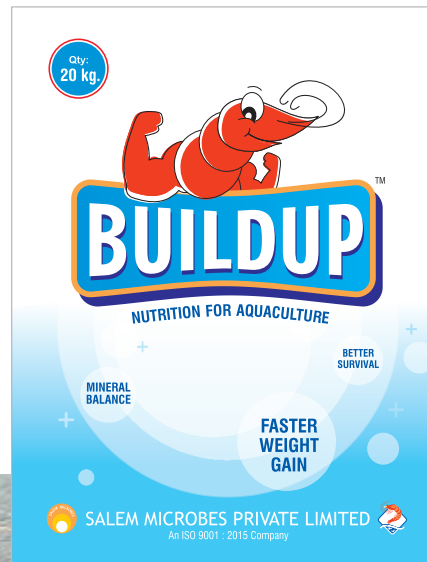
- Regulates pH, Acid base balance and osmoregulation
- Bioavailable for complete utilization
- Ensures complete shell formation and proper moulting
- Prevents body cramp, Tail cramp, Soft Shell and Hard Shell
- Improves Bloom quality and natural feed
- Increases Feed Efficiency
- Faster weight gain
- Better Survival

DOSE:

To maintain Mineral balance: 20 KG / Acre

For Soft shell & Loose Shell problem: 25 KG / Acre.

To Promote Phytoplankton and Good bloom: 30 KG / Acre



CAA/JAN22/FA/03751

AQUACULTURE MINERAL MIXTURE with TRACE MINERALS

STEPUP

STEPUP is New generation mineral mixture for use in high density culture and advanced stages of Semi-intensive culture. When the Shrimp Biomass in the pond is high, the requirement for minerals for Growth and moulting increases. Also the Micro mineral requirements for Bloom stabilization increases, To meet these demands, STEPUP is used in addition to other regular minerals.

CONTENTS: Macro minerals and Trace minerals.

BENEFITS:

- Regulates pH, Acid base balance and osmoregulation
- Bioavailable for complete utilization
- Ensures complete shell formation and proper moulting
- Prevents body cramp, Tail cramp, Soft Shell and Hard Shell
- Improves Bloom quality and natural feed
- Increases Feed Efficiency
- Faster weight gain
- Better Survival

DOSE:

During Culture: Add 5 - 10 KG / Acre, Every week.

During Looseshell / Soft shell / Body Cramp and Bend condition: 15-20 KG / Acre, for every 3 days, until problem starts receding.

Feed Supplement: Add 10- 20 gram / KG feed, once daily.



CAA/JUN18/FA/01824





www.salemicrobes.com



SALEM MICROBES PRIVATE LIMITED

Regd. Off : No. 21/10C, Bajanai Madam Street, Gugai, Salem - 636 006. Tamilnadu. India.
Customer Care : +91 70106 96630 E-Mail : contact@salemicrobes.com

 93448 37525

www.salemicrobes.com

An ISO 9001 : 2015 Company



TUVINDIA