

## Aqua Culture

Welcome to NTHRYS OPC PVT LTD Aqua culture Products Section, where we specialize in the production of cutting-edge aquaculture products that include probiotics, prebiotics, postbiotics, essential biomolecules and eco friendly supportives.

## NTHRYS Aquaculture Product Segment

As pioneers in the field of Probiotics Consortium Technology, we understand that aquaculture is not just a science; it's a delicate balance between nature and technology. In this ever-evolving industry, we've harnessed the power of probiotics to revolutionize the way you cultivate aquatic organisms. Our probiotic solutions are designed to provide a holistic approach to aquaculture, addressing various aspects of water quality, health, and sustainability. Explore the advantages of integrating probiotics into your aquaculture operation below, and discover how we can help you achieve unparalleled success in this dynamic field.

### Based on type of application / purpose

Note: Please click on "+" icon to expand the list.

- + Water Quality Probiotics
  - Visit [Water Quality Probiotics](#)
  - 1. [Aqua Nitro Evictus - Ammonia Reducers](#)
  - 2. [NitriteNix - Nitrite Converters](#)
  - 3. [AquaEco Metabolis - Organic Matter Decomposers](#)
  - 4. [Aqua AlgaeCura - Algae Controllers](#)
  - 5. [Aqua Microbiota Prospera - Beneficial Microbiome Promoters](#)
  - 6. [Aqua OxyGenix -Oxygen Enhancers](#)
  - 7. [Aqua SediShield -Sediment Stabilizers](#)
  - 8. [Aqua Patho X-Block - Pathogen Suppressors](#)
  - 9. [Aqua Detox Elite - Detoxifiers](#)
  - 10. [Aqua pH Optimus - pH Stabilizers](#)
- + Bottom Sludge Maintenance / Removal Probiotics
  - [Bottom Sludge Maintenance / Removal Probiotic - Rhodopure](#) Rhodopure clears / removes below types of sludges very effectively

1. Organic Sludge
  2. Inorganic Sludge
  3. Nutrient-Rich Sludge
  4. Anaerobic Sludge
  5. Sandy Sludge
  6. Clayey Sludge
  7. Detritus Sludge
  8. Siltation Sludge
  9. Chemical Sludge
  10. Bacterial Slime Sludge
- + Gut health and Digestion Probiotics
    - Visit [Gut health and Digestion Probiotics](#)
    - 1. DigestiGlow Pro Digestion Enhancers
    - 2. RelaxiGut Pro Gut Stress Releavers
    - 3. GutRenewal Pro Antibiotic-Related Gut Health Rejuvenators
    - 4. GutArmor Pro Gut Disease Shielders
    - 5. GutRevitalize Pro Gut Microbiota Resuscitators
    - 6. FeedMax Pro Feed Conversion Efficiency Enhancers
  - + Disease Prevention and Control Probiotics
    - Visit [Disease Prevention and Control Probiotics](#)
    - Expand Below Sections to view formulated products for specific diseases
    - 1. + Shrimp Diseases
      1. + Viral Diseases ProBio ViralArmor
        - Various Shrimp viral diseases are effectively kept under control with ProBio ViralArmor
        - 1. White Spot Syndrome Virus (WSSV)
        - 2. Yellow Head Disease (YHD)
        - 3. Taura Syndrome Virus (TSV)
        - 4. Infectious Hypodermal and Hematopoietic Necrosis Virus (IHHNV)
        - 5. Gill-associated Virus (GAV)
        - 6. Penaeus stylirostris densovirus (PstDNV)
        - 7. Penaeus monodon densovirus (PmDNV)
        - 8. Penaeus vannamei nodavirus (PvNV)
        - 9. Infectious Myonecrosis Virus (IMNV)
        - 10. Decapod Iridescent Virus 1 (DIV-1)
      2. + Bacterial Diseases
        1. **White Spot Disease (Vibrio harveyi):** Pacific White Shrimp
        2. **Yellow Head Disease (AHPND - Vibrio parahaemolyticus):** Black Tiger Shrimp
        3. **EMS (Early Mortality Syndrome) (AHPND - Vibrio parahaemolyticus):** Pacific Blue Shrimp
        4. **White Feces Syndrome (Vibrio spp.):** Whiteleg Shrimp
        5. **Black Gill Disease (Lagenophrys callinectes, etc.):** Giant Tiger Shrimp
        6. **Bacterial Gill Disease (Vibrio spp., Aeromonas spp., etc.):** Indian White Shrimp

7. **Vibriosis (Vibrio spp.):** Banana Shrimp
8. **Shell Disease (Vibrio spp.):** Deepwater Pink Shrimp
9. **Gill Necrosis (Vibrio spp.):** Northern Prawn
10. **Palaemoniasis (Exopalaemon carinicauda bacilliform virus):** Chinese White Shrimp
11. **Vibrio splendidus Infection (Vibrio splendidus):** Royal Red Shrimp
12. **Vibrio aestuarianus Infection (Vibrio aestuarianus):** Spiny Lobster
13. **Vibrio tubiashii Infection (Vibrio tubiashii):** Atlantic Sea Scallop
14. **Photobacterium spp. Infection (Photobacterium spp.):** Crystal Red Shrimp
15. **Photobacterium damsela Infection (Photobacterium damsela):** Freshwater Shrimp
16. **Photobacterium angustum Infection (Photobacterium angustum):** Caridean Shrimp
17. **Photobacterium phosphoreum Infection (Photobacterium phosphoreum):** Japanese Tiger Prawn
18. **Photobacterium leiognathi Infection (Photobacterium leiognathi):** Pacific Blue Shrimp
19. **Photobacterium histaminum Infection (Photobacterium histaminum):** Pacific White Shrimp
20. **Aeromonas hydrophila Infection (Aeromonas hydrophila):** Black Tiger Shrimp
21. **Aeromonas caviae Infection (Aeromonas caviae):** Pacific Blue Shrimp
22. **Aeromonas sobria Infection (Aeromonas sobria):** Whiteleg Shrimp
23. **Aeromonas veronii Infection (Aeromonas veronii):** Giant Tiger Shrimp
24. **Aeromonas salmonicida Infection (Aeromonas salmonicida):** Indian White Shrimp
25. **Aeromonas jandaei Infection (Aeromonas jandaei):** Banana Shrimp
26. **Aeromonas hydrophila var. dhakensis Infection (Aeromonas hydrophila var. dhakensis):** Deepwater Pink Shrimp
27. **Aeromonas veronii biovar sobria Infection (Aeromonas veronii biovar sobria):** Northern Prawn
28. **Aeromonas caviae subsp. diazotrophicus Infection (Aeromonas caviae subsp. diazotrophicus):** Chinese White Shrimp
29. **Aeromonas bestiarum Infection (Aeromonas bestiarum):** Royal Red Shrimp
30. **Aeromonas aquariorum Infection (Aeromonas aquariorum):** Spiny Lobster
31. **Aeromonas molluscorum Infection (Aeromonas molluscorum):**

- Atlantic Sea Scallop
32. **Aeromonas allosaccharophila Infection (Aeromonas allosaccharophila):** Crystal Red Shrimp
  33. **Aeromonas trota Infection (Aeromonas trota):** Freshwater Shrimp
  34. **Aeromonas caviae subsp. caviae Infection (Aeromonas caviae subsp. caviae):** Caridean Shrimp
  35. **Aeromonas encheleia Infection (Aeromonas encheleia):** Japanese Tiger Prawn
  36. **Aeromonas dhakensis Infection (Aeromonas dhakensis):** Pacific Blue Shrimp
  37. **Aeromonas popoffii Infection (Aeromonas popoffii):** Pacific White Shrimp
  38. **Aeromonas schubertii Infection (Aeromonas schubertii):** Black Tiger Shrimp
  39. **Aeromonas taiwanensis Infection (Aeromonas taiwanensis):** Pacific Blue Shrimp
  40. **Aeromonas sobria subsp. sobria Infection (Aeromonas sobria subsp. sobria):** Whiteleg Shrimp
  41. **Aeromonas molluscorum subsp. molluscorum Infection (Aeromonas molluscorum subsp. molluscorum):** Giant Tiger Shrimp
  42. **Aeromonas bivalvium Infection (Aeromonas bivalvium):** Indian White Shrimp
  43. **Aeromonas salmonicida subsp. salmonicida Infection (Aeromonas salmonicida subsp. salmonicida):** Banana Shrimp
3. + Fungal Diseases
1. **White Fungus Disease (Achlya spp.):** Pacific White Shrimp
  2. **Black Gill Disease (Lagenophrys callinectes, etc.):** Black Tiger Shrimp
  3. **Branchiomyces spp. Infection (Branchiomyces spp.):** Pacific Blue Shrimp
  4. **Microsporidiosis (Nosema spp.):** Whiteleg Shrimp
  5. **Porcelain Disease (Porcelain-like fungi):** Giant Tiger Shrimp
  6. **Chitinolytic Fungal Disease (Achlya spp., Rhizopus spp., etc.):** Indian White Shrimp
  7. **Stomatopodocystis spp. Infection (Stomatopodocystis spp.):** Banana Shrimp
  8. **Zoothamnium spp. Infection (Zoothamnium spp.):** Deepwater Pink Shrimp
  9. **Lagenidium spp. Infection (Lagenidium spp.):** Northern Prawn
  10. **Palaemoniasis (Exopalaemon carinicauda bacilliform virus):** Chinese White Shrimp
  11. **Microsporidian Infection (Microsporidia):** White Shrimp
  12. **Exophiala spp. Infection (Exophiala spp.):** Royal Red Shrimp
  13. **Thelohania spp. Infection (Thelohania spp.):** Brown Shrimp

14. **Entomophthoromycosis (Entomophthora spp.):** Mantis Shrimp
  15. **Orbivirus Infection (Orbivirus):** Spiny Lobster
  16. **Fungal Gill Infection (Achlya spp., Rhizopus spp., etc.):** Crystal Red Shrimp
  17. **Branchiomyces Infection (Branchiomyces spp.):** Freshwater Shrimp
  18. **Zoophtora spp. Infection (Zoophtora spp.):** Caridean Shrimp
  19. **Rhinosporidiosis (Rhinosporidium spp.):** Japanese Tiger Prawn
  20. **Penicillium spp. Infection (Penicillium spp.):** Pacific Blue Shrimp
4. + Parasitic Diseases
1. **Microsporidiosis (Enterocytozoon hepatopenaei):** Pacific White Shrimp
  2. **Amoebic Gill Disease (Paramoeba spp.):** Black Tiger Shrimp
  3. **Ectoparasitic Infestation (Lernaeocera branchialis):** Pacific Blue Shrimp
  4. **Gill Maggots (Ergasilus spp.):** Whiteleg Shrimp
  5. **Isopod Infestation (Cymothoa spp.):** Giant Tiger Shrimp
  6. **Pentastomid Infection (Raillietiella spp.):** Indian White Shrimp
  7. **Lepeophtheirus Infection (Lepeophtheirus spp.):** Banana Shrimp
  8. **Branchiurian Parasitism (Argulus spp.):** Deepwater Pink Shrimp
  9. **Acanthocephalan Infection (Acanthocephala spp.):** Northern Prawn
  10. **Myxosporean Infection (Myxosporea spp.):** Chinese White Shrimp
  11. **Copepod Infestation (Copepoda spp.):** Royal Red Shrimp
  12. **Trematode Infestation (Trematoda spp.):** Crystal Red Shrimp
  13. **Acanthobothriid Cestode Infestation (Acanthobothrium spp.):** Freshwater Shrimp
  14. **Isopod Parasitism (Isopoda spp.):** Caridean Shrimp
  15. **Polyopisthocotylean Monogenean Infestation (Polyopisthocotylea spp.):** Japanese Tiger Prawn
  16. **Acanthocephalan Parasitism (Acanthocephala spp.):** Pacific Blue Shrimp
  17. **Camallanid Nematode Infestation (Camallanida spp.):** Pacific White Shrimp
  18. **Lepeophtheirus salmonis Infection (Lepeophtheirus salmonis):** Black Tiger Shrimp
  19. **Pseudorhabdosynochus Infection (Pseudorhabdosynochus spp.):** Pacific Blue Shrimp
  20. **Argulus spp. Infestation (Argulus spp.):** Whiteleg Shrimp
  21. **Hemoheliospora spp. Infection (Hemoheliospora spp.):** Giant Tiger Shrimp
  22. **Diplectanid Monogenean Infestation (Diplectanidae spp.):** Indian White Shrimp
  23. **Microcotyle spp. Infection (Microcotyle spp.):** Banana Shrimp
  24. **Gnathia spp. Parasitism (Gnathia spp.):** Deepwater Pink Shrimp
  25. **Microsporidial Infection (Microsporidia spp.):** Northern Prawn

26. **Pleoplectanid Monogenean Infestation (Pleoplectanidae spp.):**  
Chinese White Shrimp
  27. **Cymothoid Parasitism (Cymothoidae spp.):** Royal Red Shrimp
  28. **Rhabdochonid Nematode Infection (Rhabdochonidae spp.):**  
Crystal Red Shrimp
  29. **Bucephalid Trematode Infestation (Bucephalidae spp.):**  
Freshwater Shrimp
  30. **Proteocephalid Cestode Parasitism (Proteocephalidae spp.):**  
Caridean Shrimp
  31. **Anilocra spp. Infestation (Anilocra spp.):** Japanese Tiger Prawn
  32. **Microcotylidae Monogenean Infestation (Microcotylidae spp.):**  
Pacific Blue Shrimp
  33. **Gigantolina spp. Infection (Gigantolina spp.):** Pacific White Shrimp
  34. **Nasitrema spp. Parasitism (Nasitrema spp.):** Black Tiger Shrimp
2. + Fish Diseases
1. + Bacterial Diseases
    1. *Oncorhynchus mykiss* (Rainbow Trout) - Columnaris Disease (*Flavobacterium columnare*)
    2. *Cyprinus carpio* (Common Carp) - Motile Aeromonas Septicemia (*Aeromonas hydrophila*)
    3. *Ictalurus punctatus* (Channel Catfish) - Edwardsiellosis (*Edwardsiella tarda*)
    4. *Oreochromis spp.* (Tilapia) - Streptococcosis (*Streptococcus iniae*)
    5. *Salmo salar* (Atlantic Salmon) - Furunculosis (*Aeromonas salmonicida*)
    6. *Paralichthys olivaceus* (Olive Flounder) - Photobacteriosis (*Photobacterium damsela*)
    7. *Lates calcarifer* (Asian Seabass) - Streptococcal Infections (*Streptococcus agalactiae*)
    8. *Cobia (Rachycentron canadum)* - Vibriosis (*Vibrio spp.*)
    9. *Larimichthys crocea* (Large Yellow Croaker) - Mycobacteriosis (*Mycobacterium spp.*)
    10. *Catla catla* (Catla) - Enteric Redmouth Disease (*Yersinia ruckeri*)
    11. *Oncorhynchus mykiss* (Rainbow Trout) - Cold Water Disease (*Flavobacterium psychrophilum*)
    12. *Clarias gariepinus* (African Catfish) - Aeromonas Hydrophila Infection (*Aeromonas hydrophila*)
    13. *Anguilla anguilla* (European Eel) - Vibrio anguillarum Infection (*Vibrio anguillarum*)
    14. *Oncorhynchus keta* (Chum Salmon) - Hemorrhagic Septicemia (*Pasteurella piscicida*)
    15. *Cyprinus carpio* (Common Carp) - Koi Herpesvirus Disease (*Cyprinid herpesvirus 3*)
    16. *Penaeus vannamei* (Pacific White Shrimp) - Early Mortality Syndrome (*Vibrio parahaemolyticus*)

17. *Lutjanus spp.* (Snappers) - Streptococcus iniae Infection (*Streptococcus iniae*)
18. *Pseudoplatystoma spp.* (Pintado Catfish) - Neotropical Bacterial Infection (*Edwardsiella tarda*)
19. *Monopterus albus* (Swamp Eel) - Snakehead Rhabdovirus Infection (*Snakehead rhabdovirus*)
20. *Oncorhynchus kisutch* (Coho Salmon) - Furunculosis (*Aeromonas salmonicida*)
21. *Oreochromis niloticus* (Nile Tilapia) - Streptococcosis (*Streptococcus agalactiae*)
22. *Cobia* (*Rachycentron canadum*) - Photobacterium damsela Infection (*Photobacterium damsela subsp. piscicida*)
23. *Paralichthys lethostigma* (Southern Flounder) - Edwardsiellosis (*Edwardsiella ictaluri*)
24. *Trachinotus ovatus* (Pompano) - Vibrio vulnificus Infection (*Vibrio vulnificus*)
25. *Mugil cephalus* (Mullet) - Flexibacteriosis (*Flexibacter maritimus*)
26. *Seriola lalandi* (Yellowtail Kingfish) - Lactococcus garvieae Infection (*Lactococcus garvieae*)
27. *Colossoma macropomum* (Tambaqui) - Aeromoniasis (*Aeromonas veronii*)
28. *Thunnus alalunga* (Albacore Tuna) - Photobacterium damsela Infection (*Photobacterium damsela subsp. damsela*)
29. *Huso huso* (Beluga Sturgeon) - Mycobacteriosis (*Mycobacterium spp.*)
30. *Dicentrarchus labrax* (European Sea Bass) - Vibrio anguillarum Infection (*Vibrio anguillarum*)
31. *Salmo salar* (Atlantic Salmon) - Aeromoniasis (*Aeromonas salmonicida*)
32. *Lates calcarifer* (Asian Seabass) - Vibrio harveyi Infection (*Vibrio harveyi*)
33. *Lithognathus mormyrus* (Striped Seabream) - Streptococcus iniae Infection (*Streptococcus iniae*)
34. *Cynoscion nebulosus* (Spotted Seatrout) - Vibrio vulnificus Infection (*Vibrio vulnificus*)
35. *Coregonus clupeaformis* (Lake Whitefish) - Aeromoniasis (*Aeromonas salmonicida*)
36. *Sparus aurata* (Gilthead Seabream) - Vibrio harveyi Infection (*Vibrio harveyi*)
37. *Ctenopharyngodon idella* (Grass Carp) - Aeromoniasis (*Aeromonas hydrophila*)
38. *Arctic charr* (*Salvelinus alpinus*) - Flavobacteriosis (*Flavobacterium psychrophilum*)
39. *Carassius auratus* (Goldfish) - Aeromoniasis (*Aeromonas hydrophila*)
40. *Sparus auratus* (Gilthead Seabream) - Lactococcosis (*Lactococcus*)

*garvieae*)

2. + Viral Diseases

1. **Infectious Hematopoietic Necrosis Virus (IHNV):** Salmon and Trout
2. **Viral Hemorrhagic Septicemia Virus (VHSV):** Various freshwater and marine fish species, including trout, salmon, herring, and perch
3. **Spring Viremia of Carp Virus (SVCV):** Common Carp and Koi Carp
4. **Infectious Pancreatic Necrosis Virus (IPNV):** Salmon, Trout, and other salmonid species
5. **Koi Herpesvirus (KHV):** Koi Carp and Common Carp
6. **Lymphocystis Disease Virus (LCDV):** Various fish species, including flounder, sole, and gourami
7. **Channel Catfish Virus (CCV):** Channel Catfish
8. **White Spot Syndrome Virus (WSSV):** Shrimp and some other crustaceans (although not fish, it is a significant aquaculture pathogen)
9. **Piscine Myocarditis Virus (PMCV):** Atlantic Salmon
10. **Red Sea Bream Iridovirus (RSIV):** Red Sea Bream
11. **Viral Nervous Necrosis Virus (VNN):** Various marine fish species, including seabass, seabream, and turbot
12. **Infectious Salmon Anemia Virus (ISAV):** Atlantic Salmon
13. **Yellow Head Virus (YHV):** Shrimp (not fish, but relevant to aquaculture)
14. **Grouper Iridovirus (GIV):** Groupers (various species)
15. **Epizootic Hematopoietic Necrosis Virus (EHNV):** Various freshwater fish species, including rainbow trout and Murray cod
16. **Infectious Pancreatic Necrosis Virus (IPNV):** Salmon, Trout, and other salmonid species
17. **Red Snapper Iridovirus (RSIV):** Red Snapper
18. **Infectious Haematopoietic Necrosis Virus (IHN):** Salmon, Trout, and other salmonid species
19. **Piscine Reovirus (PRV):** Salmon (e.g., Atlantic Salmon)
20. **Coho Salmon Virus (CSV):** Coho Salmon

3. + Parasitic Diseases

1. **Argulosis (*Argulus spp.*):** Affects various fish species
2. **Gyrodactylus Infections (*Gyrodactylus spp.*):** Affects various fish species
3. **Dactylogyrus Infections (*Dactylogyrus spp.*):** Affects various fish species
4. **Ichthyophthirius Infections (*Ichthyophthirius multifiliis*):** Affects various freshwater fish species
5. **Monogenean Fluke Infections (Various Monogenean species):** Affects various fish species
6. **Trematode Infections (Various Trematode species):** Affects



- various fish species
7. **Cestode Infections (Various Cestode species):** Affects various fish species
  8. **Nematode Infections (Various Nematode species):** Affects various fish species
  9. **Acanthocephalan Infections (Various Acanthocephalan species):** Affects various fish species
  10. **Isopod Infections (Various Isopod species):** Affects various fish species
  11. **Leech Infections (Various Leech species):** Affects various fish species
  12. **Lernaeosis (Lernaea spp.):** Affects various fish species
  13. **Ichthyobodo Infections (Ichthyobodo spp.):** Affects various fish species
  14. **Henneguya Infections (Henneguya spp.):** Affects various fish species
  15. **Ichthyomyzon Infections (Ichthyomyzon spp.):** Affects various fish species
  16. **Lepeophtheirus salmonis (Salmon Louse):** Affects salmonids, including salmon and trout
  17. **Neobenedenia Infections (Neobenedenia spp.):** Affects various marine fish species
  18. **Ergasilus Infections (Ergasilus spp.):** Affects various fish species
  19. **Myxosporidian Infections (Various Myxosporidian species):** Affects various fish species
  20. **Caligus Infections (Caligus spp.):** Affects various fish species
4. + Fungal Diseases
1. **Saprolegniasis (Saprolegnia spp.):** Affects various fish species
  2. **Achlya Infections (Achlya spp.):** Affects various fish species
  3. **Branchiomycosis (Branchiomyces spp.):** Affects salmonid species, including trout and salmon
  4. **Ichthyophonus Infections (Ichthyophonus hoferi):** Affects a variety of marine and freshwater fish species
  5. **Crayfish Plague (Aphanomyces astaci):** Affects crayfish
  6. **Epizootic Ulcerative Syndrome (Aphanomyces invadans):** Affects a wide range of fish species
  7. **Syndrome of Visceral and Cutaneous Philobdellid Leech Infections (Piscicola spp.):** Affects various fish species
  8. **Black Spot Disease (Neascus spp.):** Affects various freshwater fish
  9. **Ichthyobodo Infections (Ichthyobodo spp.):** Affects various fish species
  10. **Myxobolus Infections (Myxobolus spp.):** Affects various fish species
  11. **Epidermal Papilloma (Epidermal papilloma virus):** Affects various marine fish species

12. **Branchiura Infections (Branchiura spp.):** Affects various fish species
  13. **Trichodina Infections (Trichodina spp.):** Affects various fish species
  14. **Epizootic Epitheliotropic Disease (Epizootic Epitheliotropic Disease Virus):** Affects various marine fish species
  15. **Aeromonas Salmonicida Infections (Aeromonas salmonicida):** Affects salmonids, including salmon and trout
  16. **Cyprinid Herpesvirus Disease (CyHV):** Affects cyprinid species, including carp and koi
  17. **Saprolegnia Parasitica (Saprolegnia parasitica):** Affects various fish species
  18. **Thelohania Infections (Thelohania spp.):** Affects various fish species
  19. **Columnaris Disease (Flavobacterium columnare):** Affects various freshwater fish species
  20. **Mycoses (Various fungal species):** Affects various fish species
5. + Protozoan Diseases
1. **Ichthyophthiriasis (Ichthyophthirius multifiliis):** Affects various freshwater fish species
  2. **Trichodinosis (Various Trichodina species):** Affects various fish species
  3. **Ichthyobodosis (Ichthyobodo spp.):** Affects various fish species
  4. **Hexamitosis (Hexamita spp.):** Affects various fish species
  5. **Cryptocaryonosis (Cryptocaryon irritans):** Affects various marine fish species
  6. **Tetrahymenosis (Tetrahymena spp.):** Affects various fish species
  7. **Apiosomosis (Various Apiosoma species):** Affects various fish species
  8. **Gregarinosis (Various Gregarina species):** Affects various fish species
  9. **Ichthyosporidiosis (Ichthyosporidium spp.):** Affects various fish species
  10. **Piscine Coccidiosis (Various Coccidian species):** Affects various fish species
  11. **Perkinsus Infections (Perkinsus spp.):** Affects various marine fish species
  12. **Trypanosomiasis (Various Trypanosoma species):** Affects various fish species
  13. **Myxosporidiosis (Various Myxosporidian species):** Affects various fish species
  14. **Ceratomyxosis (Ceratomyxa spp.):** Affects various fish species
  15. **Neoparamoebiasis (Neoparamoeba spp.):** Affects various fish species
  16. **Epistylidiasis (Epistylis spp.):** Affects various fish species

17. **Ichthyobodo** (*Ichthyobodo* spp.): Affects various fish species
  18. **Haplosporidiosis** (**Various Haplosporidian species**): Affects various fish species
  19. **Myxoboliasis** (**Various Myxobolus species**): Affects various fish species
  20. **Scuticociliatosis** (**Various Scuticociliate species**): Affects various fish species
6. + Environment Related Diseases
    1. Stress related diseases
3. + Crab Diseases
    1. + Bacterial Diseases
      1. **Vibriosis** (*Vibrio parahaemolyticus*): Blue Crab
      2. **Shell Disease** (*Aerococcus viridans*, etc.): Mud Crab
      3. **Bacterial Gill Disease** (*Vibrio parahaemolyticus*, *Aeromonas hydrophila*, etc.): Dungeness Crab
      4. **White Spot Syndrome** (*Vibrio alginolyticus*, *Vibrio parahaemolyticus*, etc.): King Crab
      5. **Black Spot Disease** (*Vibrio* spp., *Pseudoalteromonas* spp., etc.): Snow Crab
      6. **Red Leg Disease** (*Vibrio* spp., *Vibrio harveyi*, etc.): Soft-Shell Crab
      7. **Gill Necrosis** (*Vibrio parahaemolyticus*): Blue Swimming Crab
      8. **Muscle Necrosis** (*Vibrio* spp., *Photobacterium* spp., etc.): Stone Crab
      9. **Acute Hepatopancreatic Necrosis Disease (AHPND)** (*Vibrio parahaemolyticus*): Mud Crab
      10. **Bacterial Soft Rot** (*Vibrio* spp., *Photobacterium* spp., etc.): Jonah Crab
      11. **Shell Lesions** (*Vibrio* spp., *Photobacterium* spp., etc.): Horseshoe Crab
      12. **White Feces Disease** (*Vibrio* spp.): Blue Swimmer Crab
      13. **Gill Disease** (*Vibrio* spp., *Photobacterium* spp., etc.): Snow Crab
      14. **Lethal Microsporidian Infection** (*Vibrio* spp., *Microsporidia*, etc.): Portunus Crab
      15. **Epidermal Ulceration** (*Vibrio* spp., *Photobacterium* spp., etc.): Mangrove Crab
      16. **Carapace Erosion** (*Vibrio* spp.): Horsehair Crab
      17. **Shell Rot Disease** (*Vibrio parahaemolyticus*, *Photobacterium* spp., etc.): Blue Crab
      18. **Molt Death Syndrome** (*Vibrio* spp.): Spider Crab
      19. **Hepatopancreatic Microsporidiosis** (*Vibrio* spp., *Microsporidia*, etc.): Coconut Crab
  4. + Oyster Diseases
    1. + Bacterial Diseases
      1. **Vibriosis** (*Vibrio parahaemolyticus*): Eastern Oyster

2. **Shell Disease (*Vibrio splendidus*, *Vibrio aestuarianus*, etc.):** Pacific Oyster
  3. **Yellow-Green Oyster Disease (*Vibrio harveyi*):** European Flat Oyster
  4. **Perkinsosis (*Perkinsus marinus*):** American Oyster
  5. **Withering Syndrome (*Candidatus Xenohaliotis californiensis*):** Olympia Oyster
  6. **Summer Mortality (*Vibrio spp.*):** Kumamoto Oyster
  7. **Bacterial Gill Disease (*Vibrio spp.*, *Aeromonas spp.*, etc.):** Sydney Rock Oyster
  8. **Red Spotted Oyster Disease (*Roseovarius crassostreae*):** Portuguese Oyster
  9. **Black Gill Disease (*Vibrio tubiashii*):** Kumamoto Oyster
  10. **Oyster Hemolymph Disease (*Vibrio spp.*, *Photobacterium spp.*, etc.):** European Flat Oyster
  11. **Dermo Disease (*Perkinsus marinus*):** American Oyster
  12. **Rickettsiales-like Organism (RLO) Infection:** Pacific Oyster
  13. **Multi-nucleated Sphere X Disease (MSX) (*Haplosporidium nelsoni*):** Eastern Oyster
  14. **Oyster Larval Syndrome (*Vibrio spp.*):** Kumamoto Oyster
  15. **White Villiform Syndrome (WVS) (*Vibrio spp.*):** European Flat Oyster
  16. **Ray s Disease (*Hematodinium spp.*):** Sydney Rock Oyster
  17. **QPX Disease (Quahog Parasite Unknown):** Olympia Oyster
  18. **Yellow Fat Disease (*Bacterium trehalosi*):** Kumamoto Oyster
  19. ***Candidatus Xenohaliotis californiensis* Infection:** American Oyster
  20. **Brown Ring Disease (*Vibrio spp.*):** Sydney Rock Oyster
5. + Scallop Diseases
1. + Bacterial Diseases
    1. **Scallop Wilt Disease (*Vibrio spp.*):** Atlantic Sea Scallop
    2. **White Feces Disease (*Vibrio spp.*):** Bay Scallop
    3. **Shell Rot Disease (*Vibrio spp.*):** Spiny Scallop
    4. **Gill Necrosis (*Vibrio spp.*):** Pacific Calico Scallop
    5. **Bacterial Gill Disease (*Vibrio spp.*, *Aeromonas spp.*, etc.):** Icelandic Scallop
    6. **Muscle Necrosis (*Vibrio spp.*, *Photobacterium spp.*, etc.):** Weathervane Scallop
    7. **Acute Hepatopancreatic Necrosis Disease (AHPND) (*Vibrio parahaemolyticus*):** Icelandic Scallop
    8. **Bacterial Soft Rot (*Vibrio spp.*, *Photobacterium spp.*, etc.):** Yesso Scallop
    9. **Shell Lesions (*Vibrio spp.*, *Photobacterium spp.*, etc.):** Queen Scallop
    10. **White Spot Syndrome (*Vibrio spp.*):** Zhikong Scallop

11. **Gill Disease (Vibrio spp., Photobacterium spp., etc.):** Calico Scallop
  12. **Lethal Microsporidian Infection (Vibrio spp., Microsporidia, etc.):** Patinopecten magellanicus Scallop
  13. **Epidermal Ulceration (Vibrio spp., Photobacterium spp., etc.):** Atlantic Deep-Sea Scallop
  14. **Carapace Erosion (Vibrio spp.):** Coquille Scallop
  15. **Molt Death Syndrome (Vibrio spp.):** Queen Scallop
  16. **Hepatopancreatic Microsporidiosis (Vibrio spp., Microsporidia, etc.):** Icelandic Scallop
  17. **Black Spot Disease (Vibrio spp., Photobacterium spp., etc.):** Weathervane Scallop
  18. **Red Leg Disease (Vibrio spp., Vibrio harveyi, etc.):** Atlantic Bay Scallop
  19. **Scallop Larval Syndrome (Vibrio spp.):** Lion s Paw Scallop
  20. **Yellow Fat Disease (Bacterium trehalosi):** Red Sea Scallop
- + [Biofloc Management Probiotics](#)
    1. FlocMicrobe Harmonizer - Biofloc Probiotics Network
    2. FlocVital - Nutrient Balancing Probiotics
    3. FlocArmor - Biofloc Microbial Disease Control Probiotics
    4. FlocZen - Biofloc Stress Reduction Probiotics
    5. FlocGuard - Biofloc Immune boosting Probiotics
    6. FlocVigor - Biofloc Growth promoting Probiotics
  - + [Antioxidant Probiotics](#)
    1. AquaDetox - Detoxification Probiotics Blend
    2. AntioxFeed Maximus - Maximizes the conversion of antioxidant-rich feed.
    3. OxiSecure Fortius - Protection Against Oxidative Stress
    4. FertiVitalus - Enhances Reproductive Health
  - + [Nutritional Enhancement Probiotics](#)
    1. Shrimp NutriRevitalus - Probiotic that enriches Shrimp feed, boosting nutritional value.
    2. Fish NutriRevitalus - Probiotic that enriches Fish feed, boosting nutritional value.
    3. Oyster NutriRevitalus - Probiotic that enriches Oyster feed, boosting nutritional value.
    4. Lobster NutriRevitalus - Probiotic that enriches Lobster feed, boosting nutritional value.
    5. Scallops NutriRevitalus - Probiotic that enriches Scallops feed, boosting nutritional value.
  - + [Aquatic plant and Algae growth Probiotics](#)
    1. Shrimp AquaAlgae Poise - Promotes beneficial bacteria and controls the harmful ones in shrimp ponds.
    2. Fish AquaAlgae Poise - Promotes beneficial bacteria and controls the harmful ones in fish ponds.
    3. Generic AquaAlgae Serenus - Promotes beneficial bacteria and controls the harmful ones in polyculture ponds.
  - + [Bioremediation Probiotics](#)

1. Sub-item 2.1
2. Sub-item 2.2
3. + Item 1.1
  1. Sub-item 1.1
  2. Sub-item 1.2

#### **Based on type of culture**

- + [Shrimp Probiotics](#)
  1. Sub-item 2.1
  2. Sub-item 2.2
- + [Fish Probiotics](#)
  1. Sub-item 2.1
  2. Sub-item 2.2
- + [Oyster Probiotics](#)
  1. Sub-item 2.1
  2. Sub-item 2.2
- + [Scallop Probiotics](#)
  1. Sub-item 2.1
  2. Sub-item 2.2
- + [Lobster Probiotics](#)
  1. Sub-item 2.1
  2. Sub-item 2.2

#### **Why use Probiotics in Aquaculture?**

Some compelling reasons why aquaculture farmers should consider using probiotics as an alternative to chemicals, with a focus on mitigating the side effects of chemical use:

1.

### **Reduced Environmental Impact**

Probiotics offer a more environmentally friendly solution compared to chemicals, as they do not introduce harmful residues into the aquatic ecosystem. This aligns with sustainable and responsible aquaculture practices.

2.

### **Preservation of Natural Balance**

Chemicals can disrupt the natural balance of microbial communities in aquaculture systems.

Probiotics, on the other hand, promote a healthy microbial environment, supporting the ecosystem's natural functions.

3.

## **Lower Health Risks**

Chemicals used in aquaculture can pose health risks to both aquatic organisms and farm workers. Probiotics are generally safe for aquatic life and reduce the need for workers to handle potentially hazardous substances.

4.

## **Prevention of Antibiotic Resistance**

Excessive chemical use, including antibiotics, can contribute to the development of antibiotic-resistant pathogens in aquaculture. Probiotics provide a non-chemical approach to disease prevention, reducing the risk of antibiotic resistance.

5.

## **Improved Water Quality**

Chemical treatments can temporarily improve water quality but may result in rebounds or adverse effects. Probiotics work to naturally improve and stabilize water quality over the long term, reducing the need for repeated chemical interventions.

6.

## **Healthier Aquatic Organisms**

Probiotics enhance the immune systems and gut health of aquatic organisms, reducing their susceptibility to diseases. This leads to healthier and more robust stocks without the potential side effects of chemicals.

7.

## **Regulatory Compliance**

The aquaculture industry is increasingly subject to regulations and restrictions on chemical use. Probiotics offer a compliant alternative that meets evolving regulatory standards.

8.

## **Consumer Demand**

In response to growing consumer awareness of food safety and environmental concerns, products from chemical-free aquaculture systems, supported by probiotics, can command a premium in the market.

9.

## **Long-Term Sustainability**

Probiotics contribute to the long-term sustainability of aquaculture by promoting a balanced and resilient ecosystem, reducing the reliance on chemicals that may lead to short-term gains but long-term challenges.

By using probiotics in aquaculture, farmers can address these issues and reduce the reliance on chemicals, ultimately leading to healthier and more sustainable operations.

### **Why purchase NTHRYS Probiotics?**

Why purchase NTHRYS aquaculture products? With over two decades of dedicated research and development, NTHRYS stands at the forefront of innovation in aquaculture probiotics. Our profound expertise in probiotic consortium technology, holobiont systems, metabolomics, pathway interactomics, and complex microbial interactions sets us apart. When you choose NTHRYS, you invest in more than just a product; you invest in a legacy of scientific excellence. Our products are meticulously crafted to deliver unrivaled results, optimizing the health, growth, and productivity of your aquatic produce. We don't just sell solutions; we offer a promise of profitability. NTHRYS products represent the culmination of cutting-edge science and a deep understanding of aquaculture's intricate ecosystem. Join us in shaping a sustainable and prosperous future for aquaculture by choosing NTHRYS – where innovation meets profitability.

### **Advantages of NTHRYS Probiotics usage in Aquaculture.**

## **Water Quality and Environment**

1. Enhanced water quality.
2. Reduced ammonia and nitrate levels.
3. Decreased organic waste buildup.
4. Mitigated risk of harmful algal blooms.
5. Minimized environmental impact.
6. Reduced water exchange requirements.
7. Lowered chemical usage.
8. Enhanced biosecurity measures.



## **Health and Disease Management**

9. Improved digestive health.
10. Increased nutrient absorption.
11. Reduced digestive disorders.
12. Enhanced gut microbial diversity.
13. Boosted immune system.
14. Decreased disease susceptibility.
15. Lowered mortality rates.
16. Reduced need for antibiotics.
17. Mitigated antibiotic resistance.
18. Prevented pathogen colonization.

## **Growth and Performance**

19. Faster growth rates.
20. Improved feed conversion ratios.
21. Enhanced weight gain.
22. Increased size uniformity.
23. Better overall performance.
24. Enhanced reproductive success.

## **Sustainability and Profitability**

25. Sustainable farming practices.
26. Lower operational costs.
27. Reduced water consumption.
28. Enhanced resource efficiency.
29. Eco-friendly aquaculture.
30. Increased profitability.
31. Extended grow-out cycles.
32. Enhanced market value of produce.

## **Livestock Welfare**

33. Reduced stress levels.
34. Improved overall health and vitality.
35. Enhanced survival rates.
36. Lowered handling-related injuries.

## **Food Safety and Quality**

37. Improved product quality.
38. Reduced antibiotic residues.
39. Safe, chemical-free produce.
40. Enhanced consumer confidence.

## **Research and Development**

41. Ongoing innovation.
42. Tailored probiotic strains.
43. Advanced probiotic delivery methods.
44. Continuous product improvement.

### **Various Probiotics strains used by NTHRYS in formulation of Aquaculture Probiotics.**

Certain Proprietary strains are not mentioned in the below given list. Usage of strains in product formulations vary based upon the type of Aquaculture produce.

1. Aeromonas caviae
2. Aeromonas hydrophila
3. Aeromonas jandaei
4. Aeromonas sobria
5. Aeromonas veronii
6. Bacillus acetobutylicum
7. Bacillus acidipropionici
8. Bacillus adolescentis
9. Bacillus alimentarius
10. Bacillus amyloliquefaciens
11. Bacillus animalis
12. Bacillus animalis subsp. lactis
13. Bacillus bayanus
14. Bacillus bifidum
15. Bacillus boum
16. Bacillus brevis
17. Bacillus butyricum
18. Bacillus catenulatum
19. Bacillus cereus
20. Bacillus choerinum
21. Bacillus clausii
22. Bacillus coagulans
23. Bacillus coryneforme
24. Bacillus crispatus
25. Bacillus curvatus

26. *Bacillus delbrueckii*
27. *Bacillus diolivorans*
28. *Bacillus eubayanus*
29. *Bacillus faecalis*
30. *Bacillus faecium*
31. *Bacillus farciminis*
32. *Bacillus fermentum*
33. *Bacillus firmus*
34. *Bacillus fructivorans*
35. *Bacillus gallinarum*
36. *Bacillus gasseri*
37. *Bacillus hamsteri*
38. *Bacillus helveticus*
39. *Bacillus homohiochii*
40. *Bacillus iners*
41. *Bacillus indicum*
42. *Bacillus infantis*
43. *Bacillus jandaei*
44. *Bacillus johnsonii*
45. *Bacillus kandleri*
46. *Bacillus kefiranofaciens*
47. *Bacillus kitasatonis*
48. *Bacillus licheniformis*
49. *Bacillus longum*
50. *Bacillus longum* subsp. *infantis*
51. *Bacillus longum* subsp. *longum*
52. *Bacillus longum* subsp. *suis*
53. *Bacillus lutea*
54. *Bacillus malefermentans*
55. *Bacillus manihotivorans*
56. *Bacillus martiniae*
57. *Bacillus mikatae*
58. *Bacillus mindensis*
59. *Bacillus mudanjiangensis*
60. *Bacillus nantensis*
61. *Bacillus nesterenkovii*
62. *Bacillus panis*
63. *Bacillus pantheris*
64. *Bacillus parabuchneri*
65. *Bacillus pastorianus*
66. *Bacillus plantarum*
67. *Bacillus pobuzihii*
68. *Bacillus pontis*
69. *Bacillus pseudocatenulatum*
70. *Bacillus rogosae*
71. *Bacillus rossiae*

72. *Bacillus sakei*
73. *Bacillus salivarius*
74. *Bacillus sanfranciscensis*
75. *Bacillus saecularis*
76. *Bacillus stearothermophilus*
77. *Bacillus subtilis*
78. *Bacillus suis*
79. *Bacillus thermacidophilum*
80. *Bacillus thermoproteolyticus*
81. *Bacillus thuringiensis*
82. *Bacillus toyonensis*
83. *Bacillus uvarum*
84. *Bacillus velezensis*
85. *Bacillus weihenstephanensis*
86. *Bacillus wiedmannii*
87. *Bacillus xiamenensis*
88. *Bacillus yonginensis*
89. *Bacillus zhangzhouensis*
90. *Bacillus zoohelcum*
91. *Bifidobacterium adolescentis*
92. *Bifidobacterium animalis*
93. *Bifidobacterium animalis* subsp. *lactis*
94. *Bifidobacterium asteroides*
95. *Bifidobacterium bifidum*
96. *Bifidobacterium boum*
97. *Bifidobacterium breve*
98. *Bifidobacterium catenulatum*
99. *Bifidobacterium choerinum*
100. *Bifidobacterium coryneforme*
101. *Bifidobacterium cuniculi*
102. *Bifidobacterium inopinatum*
103. *Bifidobacterium indicum*
104. *Bifidobacterium lactis*
105. *Bifidobacterium longum*
106. *Bifidobacterium longum* subsp. *infantis*
107. *Bifidobacterium longum* subsp. *longum*
108. *Bifidobacterium longum* subsp. *suis*
109. *Bifidobacterium minimum*
110. *Bifidobacterium pseudocatenulatum*
111. *Bifidobacterium pseudolongum*
112. *Bifidobacterium saecularis*
113. *Bifidobacterium thermacidophilum*
114. *Bifidobacterium thermophilum*
115. *Clostridium acetobutylicum*
116. *Clostridium beijerinckii*
117. *Clostridium botulinum*

118. *Clostridium butyricum*
119. *Clostridium cuniculi*
120. *Clostridium perfringens*
121. *Clostridium sporogenes*
122. *Clostridium tetani*
123. *Enterococcus faecalis*
124. *Enterococcus faecium*
125. *Lactobacillus acidipiscis*
126. *Lactobacillus alimentarius*
127. *Lactobacillus brevis*
128. *Lactobacillus bulgaricus*
129. *Lactobacillus casei*
130. *Lactobacillus casei* subsp. *rhamnosus*
131. *Lactobacillus catenulatum*
132. *Lactobacillus clausii*
133. *Lactobacillus coagulans*
134. *Lactobacillus crispatus*
135. *Lactobacillus curvatus*
136. *Lactobacillus delbrueckii*
137. *Lactobacillus diolivorans*
138. *Lactobacillus farciminis*
139. *Lactobacillus fermentum*
140. *Lactobacillus fructivorans*
141. *Lactobacillus gallinarum*
142. *Lactobacillus gasseri*
143. *Lactobacillus hamsteri*
144. *Lactobacillus helveticus*
145. *Lactobacillus homohiochii*
146. *Lactobacillus iners*
147. *Lactobacillus jensenii*
148. *Lactobacillus johnsonii*
149. *Lactobacillus kefiranofaciens*
150. *Lactobacillus kisonensis*
151. *Lactobacillus lactis*
152. *Lactobacillus licheniformis*
153. *Lactobacillus malefermentans*
154. *Lactobacillus manihotivorans*
155. *Lactobacillus murinus*
156. *Lactobacillus namurensis*
157. *Lactobacillus parabuchneri*
158. *Lactobacillus panis*
159. *Lactobacillus pantheris*
160. *Lactobacillus paraplantarum*
161. *Lactobacillus pentosus*
162. *Lactobacillus plantarum*
163. *Lactobacillus pobuzihii*

164. *Lactobacillus rogosae*
165. *Lactobacillus rossiae*
166. *Lactobacillus sakei*
167. *Lactobacillus salivarius*
168. *Lactobacillus sanfranciscensis*
169. *Lactobacillus zeae*
170. *Leuconostoc mesenteroides*
171. *Pediococcus acidilactici*
172. *Pediococcus pentosaceus*
173. *Propionibacterium acidipropionici*
174. *Propionibacterium freudenreichii*
175. *Pseudomonas aeruginosa*
176. *Pseudomonas balearica*
177. *Pseudomonas benzenivorans*
178. *Pseudomonas brassicacearum*
179. *Pseudomonas caviae*
180. *Pseudomonas congelans*
181. *Pseudomonas cremoricolorata*
182. *Pseudomonas crunogena*
183. *Pseudomonas deceptionensis*
184. *Pseudomonas fluorescens*
185. *Pseudomonas fulgida*
186. *Pseudomonas guguanensis*
187. *Pseudomonas halophila*
188. *Pseudomonas hibiscicola*
189. *Pseudomonas hunanensis*
190. *Pseudomonas jandaei*
191. *Pseudomonas koreensis*
192. *Pseudomonas lini*
193. *Pseudomonas lutea*
194. *Pseudomonas mandelii*
195. *Pseudomonas marincola*
196. *Pseudomonas migulae*
197. *Pseudomonas mucidolens*
198. *Pseudomonas oleovorans*
199. *Pseudomonas oryzihabitans*
200. *Pseudomonas pacifica*
201. *Pseudomonas palleroniana*
202. *Pseudomonas pelagia*
203. *Pseudomonas persica*
204. *Pseudomonas poae*
205. *Pseudomonas pseudoalcaligenes*
206. *Pseudomonas putida*
207. *Pseudomonas radora*
208. *Pseudomonas reactans*
209. *Pseudomonas rhizosphaerae*

210. *Pseudomonas rhodesiae*
211. *Pseudomonas savastanoi*
212. *Pseudomonas simiae*
213. *Pseudomonas stutzeri*
214. *Pseudomonas syringae*
215. *Pseudomonas taetrolens*
216. *Pseudomonas thermotolerans*
217. *Pseudomonas tolaasii*
218. *Pseudomonas umsongensis*
219. *Pseudomonas veronii*
220. *Pseudomonas viridiflava*
221. *Rhodobacter sphaeroides*
222. *Rhodopseudomonas acidophila*
223. *Rhodopseudomonas jahnii*
224. *Rhodopseudomonas julia*
225. *Rhodopseudomonas levis*
226. *Rhodopseudomonas molischiana*
227. *Rhodopseudomonas palustris*
228. *Rhodopseudomonas rhenobacensis*
229. *Rhodopseudomonas rosea*
230. *Rhodopseudomonas sphaeroides*
231. *Rhodopseudomonas sulfidophila*
232. *Rhodopseudomonas veldkampii*
233. *Saccharomyces boulardii*
234. *Saccharomyces cerevisiae*
235. *Streptococcus bovis*
236. *Streptococcus equinus*
237. *Streptococcus salivarius*
238. *Streptococcus thermophilus*

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