Biotechnological -Mikrobiyal Products

R&D Project

Feb, 2021 Houston, TX, USA

Aim: Organic & Microbial input For Sustainable World

APPLICATION OF THE PRODUCTS

General List of The Products

A. AGRICULTURE

1- ORGANIC MICROBIAL BIO- FERTILIZERS

2- ORGANIC MICROBIAL BIO- PESTICIDES

3- ORGANIC COMPOST PRODUCTION

B. FARM ANIMAL

1- Probiotic For Cow, Sheep, goat, Chicken, Bird, Horse, Camel, and Fish

2- BARN ODOR DESTROYER

3- AQUARIUM CLEANING

4- FISH & SHRIMP POND CLEANING

5- SLAUGHTERHOUSE CLEANING AND ODOR DEGRADATION

C-GOLD PRODUCTION INDUSTRY

Microbial Degradation Of Cyanide

D- ENVIROMENT

1- POLLUTED POND CLEANING and ODOR DEGRADATION.

2- MUNICIPIAL and INDUSTRIAL SEWER CLEANING & ODOR DEGRADATION

3- MUNICIPIAL SOLID WASTE & ODOR DEGRADATION

3- MUNICIPAL AND INDUSTRIAL PIPE PLUGGED MAINTENANCE

E- OIL SPILL CLEANING

1- OIL SPILL CLEANING In LAND

2- OIL SPILL CLEANING In WATER

Brief Description of The Products

A.1. WHAT IS MICROBIAL BIO-FERTILIZER?

A Bio fertilizer (also bio-fertilizer) is a substance which contains living microorganisms which, when applied to seeds, plant surfaces, or soil, colonizes the rhizosphere or the interior of the plant and promotes growth by increasing the supply or availability of primary nutrients to the host plant.

A.1.1. BENEFITS OF BIO-FERTILIZER

1- Cost Effective relative chemical fertilizer

2- Organic & Safe

3- Increases drop yield up to 50%

4- Stimulate plant growth

5- Protection against drough and Salt

6- Protection against soil born disease

7- Replaces chemical introgen and phosphorus by 25%

8- Microbial Function is in Long duration

9- Increases Seed Germination Ratio & Protects spoilage

10- Degrading od harmful pesticide in Soil

A.1.2. FUNCTIONAL GROUPS OF MICROORGANISM

1- Nitrogen Fixing

2- Phosphate Solubilizing

3- Potassium Solubilizing

4- Cellulose Degrading

5- Iron Solubilizing

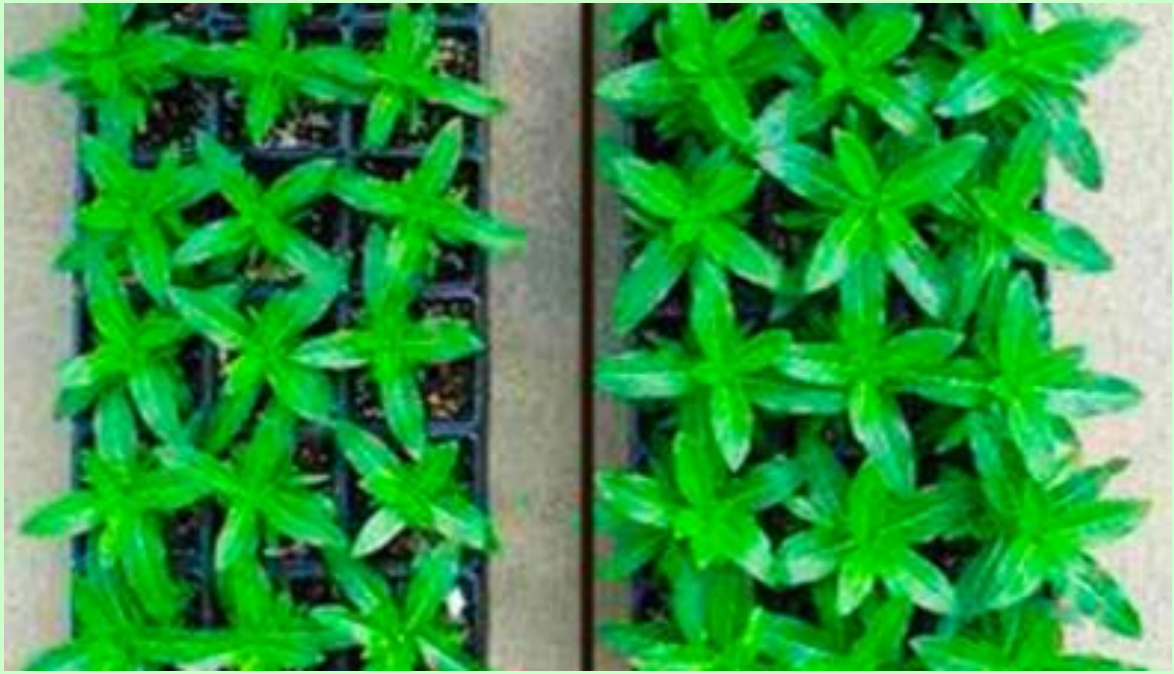
6- Growth Hormone Producing

7- Zinc Solubilizing

8- Protein Degrading

9- Oil Degrading

10- Nutrient Absorbent



A.2.1. WHAT IS BIO-PESTICIDE

All the living organism which are cultivated in the laboratory on large scale and are used and exploited experimentally for the control of harmful organism given below.

1- Pathogen Fungi

2- Pathogen Insect

3- Pathogen Nematode

4- Pathogen Bacteria

A.2.2. Advantages of Bio-Pesticide

1- No harmful residues detected

2- Cheaper than chemical pesticides when locally produced.

3- More effective than chemical pesticides in the long-term

4- Biodegradable

Nematode in Root

A.3. ORGANIC COMPOST PRODUCTION

LEAF & MANURE COMPOST PRODUCTION

A.3.1 Advantages Of Using Microorganism

1- Enrich with agricultural microorganism to promote plant growth.

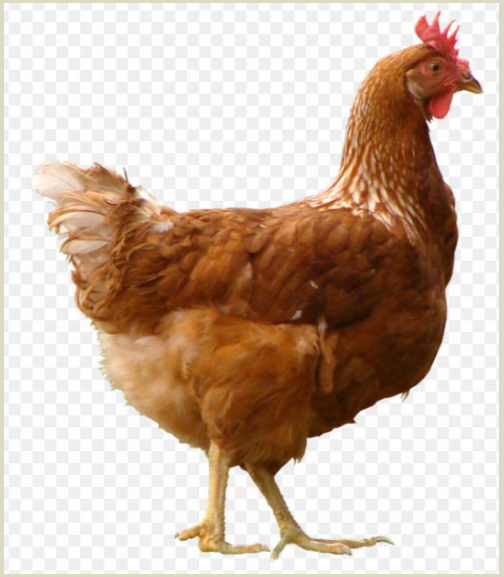
2- Time consuming. Saving time.

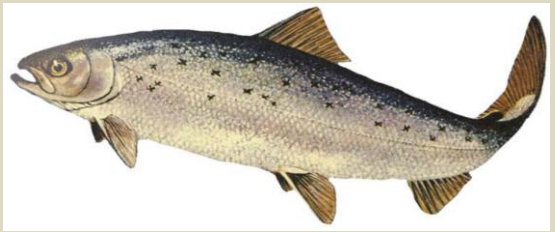
3- Compost quality.

4- Decrease pathogenic microorganism.

5- Eliminate its odor.

B.1. Probiotics For Animals





B.1.1. WHAT IS PROBIOTICS?

Probiotics are live bacteria and yeasts that are good for health, especially vertebrates' digestive system.

We usually think of bacteria as something that causes diseases.

But the body is full of bacteria, both good and bad.

Probiotics are often called "good" or "helpful" bacteria because they help keep your gut healthy.

B.1.2. Benefits of Probiotics

1-Aid digestion and modulate the immune system and make health animals.

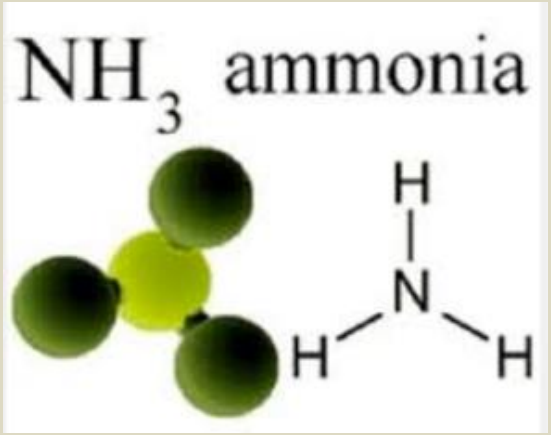
2- Probiotics produce short-chain fatty acids, which inhibit the growth and activity of harmful bacteria, such as E. coli, Salmonella, and Clostridium

3-Reduce the time for acute diarrhea,

4- Increased growth and feed efficiency.

6- Decrease cost of disease management.

B.2. Elemination of Barn Odor



B.2.1 Elemination of Barn Odor

What is that smell ?

Because of ammonia drive from urine and sulfide because of metabolite of protein. Both of them causes bad smells in barn.

B.2.2. Benefits of Odor Degrader

1-Convert toxic ammonia in to nitrate and hydrogen sulphone into sulphate, it helps to eliminate odor.

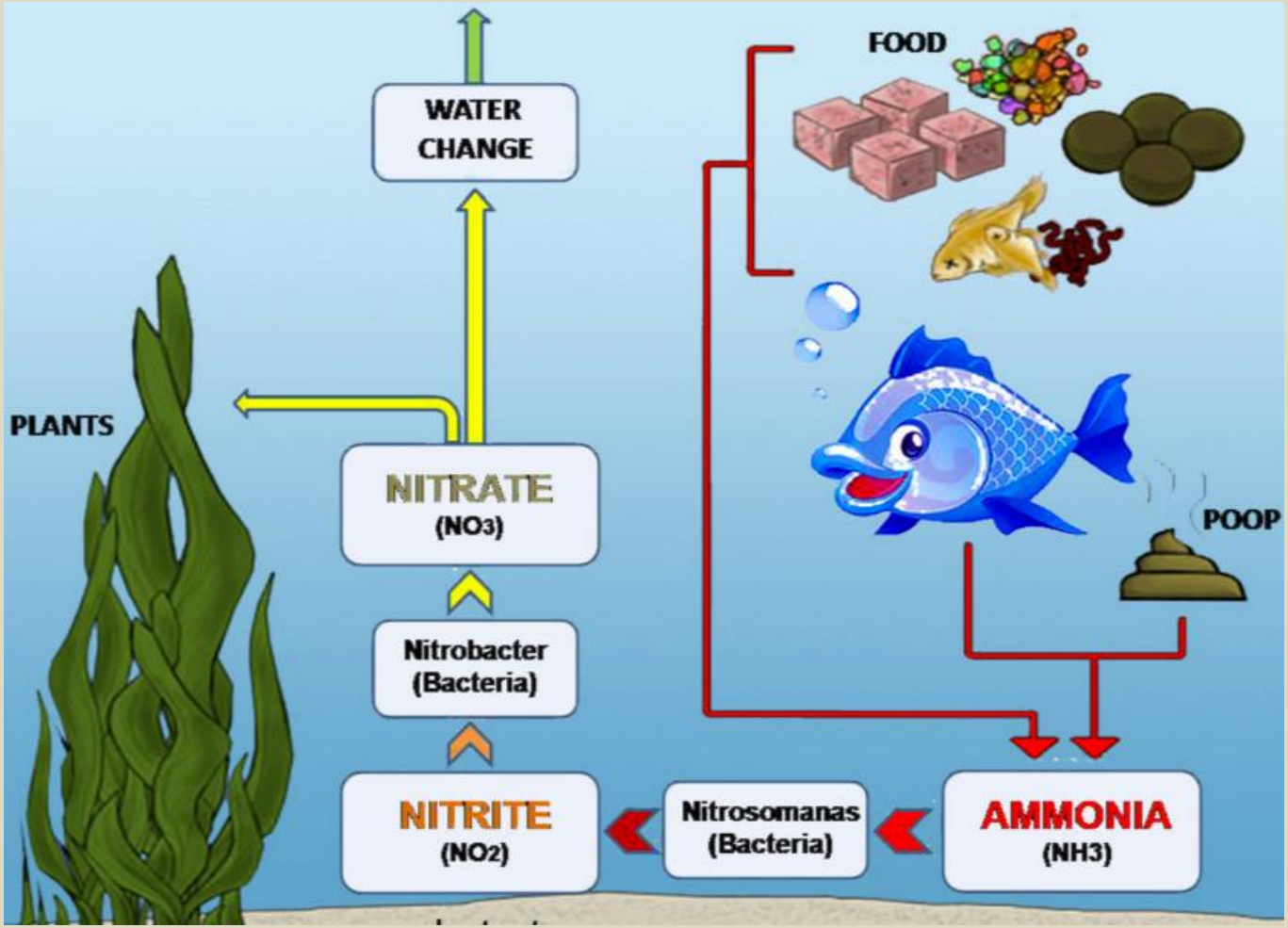
2- Odor effects animal lung and causes lung problem. Because of odor degrader, animal become healthy.

B.3. Aquarium Cleaning By Microorganism

B.3.1 What is reason of dirt in Aquarium an Pond?

Ammonia, Sulfide derived from animal waste and organic material causes pollution in water.

B.3.2 Pollution in Aquarium and Pond



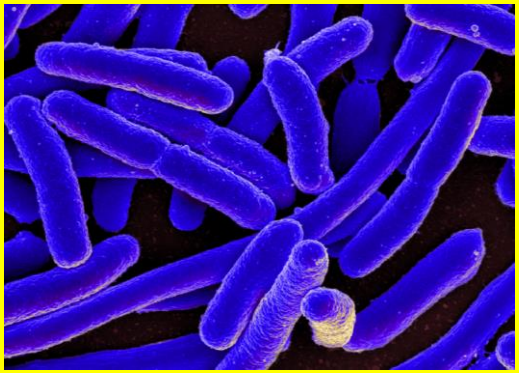
B.3.3. Mechanism of Cleaning

Convert toxic ammonia in to nitrate and hydrogen sulphone into sulphate, it helps to eliminate odor and clean aquarium and ponds.

B.4. Cleaning Dirty Fish Farming Water

C. GOLD PRODUCTION INDUSTRY

Microbial Degradation Of Cyanide



C.1 Gold Mining Cyanide Use

Gold cyanidation (also known as the cyanide process) is for extracting gold from low-grade ore by converting the gold to a water-soluble coordination complex. It is the most commonly used process for gold extraction.

C.2. Cyanide Toxicity

Cyanide is highly toxic for most living organisms because it forms very stable complexes with transition metals that are essential for protein function, i.e., iron.

C.3.Microbiologic Degradation Of Cyanide

There are thousands of areas in the U.S.A. and Europe contaminated with cyanide-containing wastes as a consequence of a large number of industrial activities such as gold mining, steel and aluminum manufacturing, electroplating and nitrile pesticides used in agriculture.

Chemical treatments to remove cyanide are expensive and generate other toxic products. By contrast, cyanide biodegradation constitutes an appropriate alternative treatment.

C.4. Advantages of Biodegradation

1- Cheap

2- Easy

3- Safe Metabolite

4- Environment Friendly

D.1. POLLUTED POND CLEANING and ODOR DEGRADATION.

D.2. MUNICIPIAL and INDUSTRIAL SEWER CLEANING & ODOR DEGRADATION

D.3. MUNICIPIAL SOLID WASTE & ODOR DEGRADATION

D.4. Municipal and Industrial Pipe Plugged Maintenance

E.1. OIL SPILL CLEANING IN LAND

E.2- OIL SPILL CLEANING IN WATER


ENGINEERING

WE HAVE A LONG RESEARCH RESULT

MICROBIAL-MICROORGANISM BACTERIAS

(ALL EXPERIMENTALLY PROVEN)

1-Phosphate Remover Bacteria:

2-Potassium-Solving Bacteria:

3- Nitrogen Fixing bacteria:

4-Zinc Remover Bacteria:

5-Iron, Soluble Bacteria:

6- Cellulose Shredders: Hummus maker:

7-Protein Shredders: Hummus maker:

8- Phytic Acid disintegrants.

9-Oil Shredders:

11-Harmful Nematode Worms killing Nematicide Bacteria

12- Harmful Mushroom-killing Fungicide Bacteria

13-Harmful Bacteria killing: Bactericide

14- Bacteria producing Plant Hormone IAA, GA:

THE PRODUCTS WE ARE PLANNED TO MANUFACTURE

1. PRODUCT: MICROBIIAL GUBRE (GENERAL-INCLUDING ALL)
2. PRODUCT: PLANT COCKES GROWING (IAA, GA PRODUCING) GROUP
3. PRODUCT: NEMATOCIDE (NEMATOD OLDUREN) BACTERIA GROUP: BEFORE CULTIVATION CLEANING
4. PRODUCT: FUNGICIDE (MUSHROOMEN) BACTERIA GROUP CULTIVATION BEFORE CLEANING
5. PRODUCT: INSECTICIDE: INSECTICIDAL GROUP
6. PRODUCT : COMPOST PRODUCING FERTILIZER GROUP

NEW ORGANISMS TO BE ADDED

PLANT GROWTH PROMOTING & P solubilizing RHIZOBACTERIA

Pseudomonas fluorescens

Pseudomonas putida.

Pseudomonas alcaligenes.

Pseudomonas striata.

PHOSPHATE MOBILIZER BIOFERTILIZER

1- ENDOMYCORHIZAE

Glomus sp., Gigaspora sp., Acaulosporasp., Sclerocystis sp. Scutellospora sp.

2-ECTOMYCORHIZAE

Laccaria sp. Pisolithus sp. Boletus sp. Amanita sp. Rhizopogon sp., Scleroderma sp.

N2 FIXING BIOFERTILIZER

FREE LIVING

Azatobacter chrococcum.
Azatobacter vinelandii (Dolvett) 12837 atcc.
Azotobacter brasilense
, Anabaena, Nostoc. Ocilatoria
Rhodopseudomonas palustris

SYMBIOTIC

Rhizobium, Frankia, Anabaena azollae.
Rhizobium leguminisarum.
Bradyrhizobium japonicum. Soybean.
Rhizobium meliloti Alfaalfa

ASSOCIATIVE SYMBIOTIC

Azosprillum lipoferum
Azosprillum brasilense Dolvett
Acetobacter diazotiophicus.

BIOINSECTICIDE

Paecliomyces fumosoroseus.(Aphids &Whiteflies)

Chromobacterium subtsugae(Whiteflies, Sting bug, Cucumber beetle, Diamond back bug)

Metarhizium anisopliae(Cockroach, Drywood Termite,Tick,Beetles group.)

Beauveria bassiana (Whiteflies, Soft bodies insrct, mites, thrips.

Trichoderma harzianum-Trichoderma atrovride.

Trichoderma loongii-

Trichoderma viride

Trichoderma longibranchiatum

Trichoderma reesei

Paecliomyces lilacinus. Nematodocide

Isaria fumosorosea

Verticillium lecanii

Ampelomyces quisqualis.

Streptomyces lydicus

Chaetomium cupreum.

PHOSPHATE SOLUBILIZING FUNGI BIOFERTILIZER

Aspergillus awamorii

Penicillium bilaii. (Dolvet)

Torulospora globosa. **YEAST**

Aspergillus oryzae.

PHOSPHATE SOLUBILIZING BACTERIA BIOFERTILIZER

Pseudomonas PUTIDA

Pseudomonas STRIATA

Pseudomonas FLUORESCENS. Biofungicide.

SULPHUR SOLUBILIZING BIOFERTILIZER

Thiobacillus thiooxidants

Mn SOLUBILIZING FUNGI BIOFERTILIZER

Penicillium citrinum.

ZINC MOBILIZING BACTERIAL BIOFERTILIZER

Gluconobacter oxidans

Pseudomonas gessardii

Thiobacillus thioxidants

POTASH MOBILIZING BACTERIAL BIOFERTILIZER

Frateuria aurantia

Usage of Mycorrhizal fungi in vegetation-mats-production for extensiv roof greening

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Schnega 02.12.2014

NIRA

Use of mycorrhizal fungi at NIRA GmbH & Co. KG

- 2006 tried the first time in Sods and Sedum-mats production

Main-question: Impact on Sedum and sods?

No visual differenz between Method 1 and 2

- Visual effect on following Sedum species:
  - *S. spurium*
  - *S. kamtschatikum*
  - *S. lydium*
  - *S. reflexum*

1. Spreading Mycorrhiza on the already arranged field

- Usage of a gritter
  - labor-extensive
  - exact amound

(100ml/m²)

Production Stages Sedum-mats

- Outdoor production
- Carrier
- Substrate (xeroterr)
- Sedum-shoots

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Main-question: Impact on Sedum and sods?

Production

- Sods since 1972 (2014: 130 ha)
- Vegetation-mats since 1982 (2014: 30 ha)
- 15 employees

Niedersächsische Rasenkulturen
NIRA GmbH & Co. KG

- Located in the North-West of Germany

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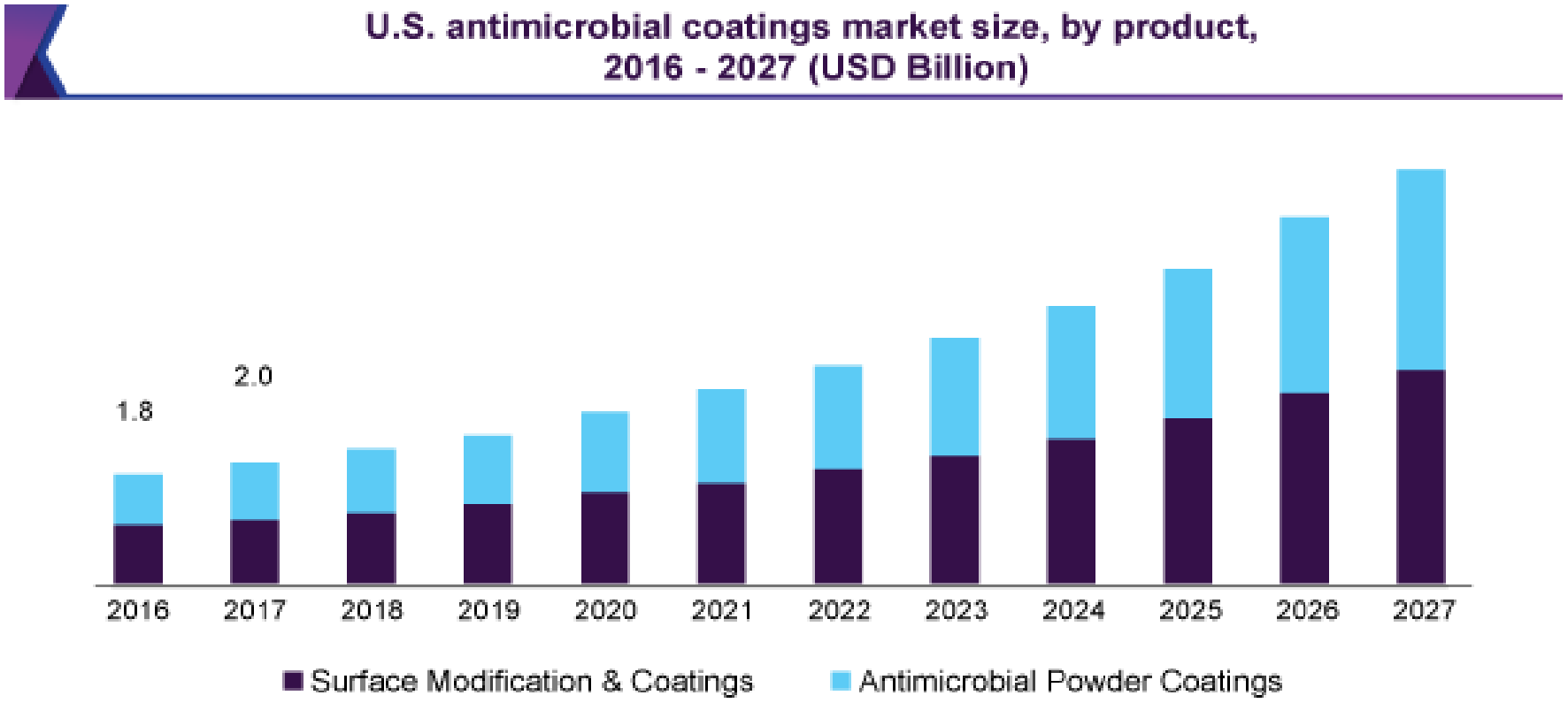
The global antimicrobial coatings market size was valued at USD 7.1 billion in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 12.8% from 2020 to 2027. .



Source: www.grandviewresearch.com

Sample Facilities

- https://www.biositechnology.com/

https://microbelifehydro.com/

This is Deal Organic & Microbial input For Sustainable World

Would you like to be a support, investor, investment partner for this project?

Contact:enis@investorconnectus.com