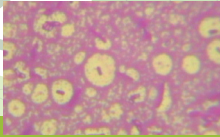


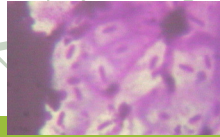
# BAAGWALA

## AGRO & BIOTECH



### Azotobacter (Nitrogen Fixing Bacteria)

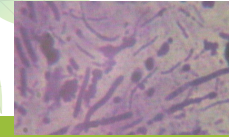
It is the important and well known free living nitrogen fixing aerobic bacterium. It is used as a Bio-Fertilizer for all non-leguminous plants especially rice, cotton, vegetables etc. Azotobacter cells are not present on the rhizosphere but are abundant in the rhizosphere region. The lack of organic matter in the soil is a limiting factor for the proliferation of Azotobacter in the soil. Azotobacter have been found to produce some antifungal substance which inhibits the growth of some soil fungi like Aspergillus, Fusarium, Curvularia, Alternaria, Helminthosporium, Fusarium etc.



### Rhizobium (Nitrogen Fixing Bacteria)

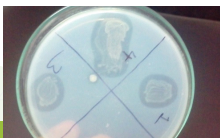
Rhizobium is a soil habitat bacterium, which can able to colonize the legume roots and fixes the atmospheric nitrogen symbiotically. It is most efficient fertilizer for leguminous plant.

The bacteria infect the legume root and form root nodules within which they reduce molecular nitrogen to ammonia which is reality utilized by the plant to produce valuable proteins, vitamins and other nitrogen containing compounds.



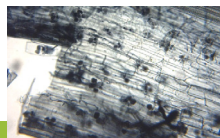
### Azospirillum Nitrogen Fixing Bacteria

The bacteria of Genus Azospirillum are N<sub>2</sub> fixing-organisms isolated from the root and above ground parts of a variety of crop plants. The organism proliferates under both anaerobic and aerobic conditions but it is preferentially micro-aerophilic in the presence or absence of combined nitrogen in the medium. Apart from nitrogen fixation, growth promoting substance production (IAA), disease-resistance and drought tolerance are some of the additional benefits due to Azospirillum inoculation. Considerable quantity of nitrogen fertilizer up to 25-30% can be saved by the use of Azospirillum inoculant.



### Phosphate Solubilizing Bacteria/Fungi

Phosphate solubilizer Bacteria/Fungi is one of the important biofertilizer. Phosphorus is a major nutrient for plants inducing vigorous growth and also contributing to their disease-resistance. Phosphorus helps in root formation and plant growth. Phosphate solubilizer Bacteria/Fungi has highly efficient phosphate solubilizing bacteria/fungi (Bacillus sp./Aspergillus sp.) that grow and secrete organic acids, which dissolve unavailable phosphate into soluble form and make it available to the plants.



### Mycorrhiza

The transfer of nutrients mainly phosphorus and also zinc and sulphur from the soil milieu to the cells of the root cortex is mediated by intracellular obligate fungal endosymbionts of the genera Glomus, Gigaspora, Acaulospora, Sclerocysts and Endogone which possess vesicles for storage of nutrients and arbuscles for funneling these nutrients into the root system. By far, the commonest genus appears to be Glomus, which has several species distributed in soil.



### Potash Mobilizing Bacteria

Potash Mobilizer is a beneficial bacterium capable of mobilizing Potassium available in soil into the root zone of plants. It works well in all types of soil. Use of such bacteria can increase the availability of more potash in usable form to the plants. When applied to soil, potash mobilizing bacterium multiplies, and helps to mobilize potassium fixed in soil. Potash mobilizing bacteria mobilizes the insoluble potash in the soil into easily available form to the plant.



### BioDecomposer

This product contains dormant form of mineralizing/decomposing bacteria, actinomycetes and cell mass of fungal spore which accelerate the process of mineralization/decomposition under aerobic and anaerobic condition.

These Bacteria and Fungus are capable of mineralizing complex organic raw material, agricultural waste, etc. and produce carbon dioxide (CO<sub>2</sub>), ammonia, water, heat and humus. These bacteria and fungus accelerates the process of mineralization and gives the organic raw material in simple form in 30-40 days depending upon type of organic raw material, which normally takes 160-180 days. It breaks down proteins, fats and complex carbohydrates such as cellulose, hemicellulose and lignin.

**Direction for use:** Make the solution of Biodecomposer in sufficient quantity of jiggery water.

Spray this solution on heap of organic raw material, agricultural waste etc. of one metric ton.

After every 8-10 days turn the organic raw material of the heap and again spray this solution on the heap and mix it thoroughly.

Keep this heap for 30-40 days. Now the compost is ready for use in the field.

**Biofertilizer application methodology**

There are three ways of using Liquid Bio-fertilizers

- Seed treatment
- Root dipping
- Soil application

**Seed treatment :** Mix 40 ml of biofertilizer with appropriate quantity of water and thoroughly mix with 1 kg of seed and dry the seed under shade before sowing.

**Soil treatment :** Mix 500 ml of biofertilizer with appropriate content of FYM or carrier and mix well. Broadcast the content in 1 acre land before last ploughing.

**Drip irrigation :** Mix 5.0 ml of biofertilizer per 1 liter of water.

**Caution :** Store the biofertilizer bottle in cool and dry place.

Avoid direct heating or sunlight to the biofertilizer bottle.

Shake well before use.

## CONTACT

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We also provide other organic product like **Amino acid fertilizer, Mix consortium of NPK biofertilizer, Flower Stimulating Agent, Tonic, Plant growth promoter and Neem Oil.**



### Zinc Solubilizing Bacteria

Zinc is an imperative micronutrient required for optimum plant growth. Zinc solubilizing bacteria are potential alternatives for zinc supplementation and convert applied inorganic zinc to available forms. Plants can uptake zinc as divalent cation but only a very minor portion of total zinc is present in soil solution as soluble form. Rest of the zinc is in the form of insoluble complexes and minerals. Due to unavailability of zinc in soil, zinc deficiency occurs which is one of the most widespread micronutrient deficiency. Zinc solubilizing microorganisms solubilize zinc through various mechanisms, one of which is acidification.

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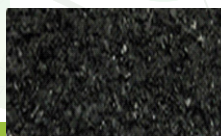
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### Seaweed Fertilizer

Seaweed fertilizer is enriched with many minerals, enzymes and vitamins that help in stimulating plant growth. It helps in microbial activity in the soil, accelerates photosynthesis and induces flowering. Seaweed Extract protects plants from Aphids, fungus and insect attacks. It reduces the shedding of both leaves and immature fruits. Sea Weed Extract retains moisture content in the soil, stimulates cell division, increases Nitrogen percentage, maintains appropriate temperature in the soil and thus, aids in healthy plant growth. In addition, the extract powder helps in white root development and enhances nutrient uptake.



### Humic Acid Fertilizer

Humic Acid is a natural occurring component of humorous components. Humate and humic acid are important in crop agriculture because of their soil enriching properties. These organic components enhance the nutrient-holding capacity of the soil and also may increase or enhance micronutrient uptake. It enhances fertilizer utilization, acts as a buffer and improves the growth of important microbial that help with soil detoxification, helps in the aeration and bio-activation of the soil and also in seed germination.



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