

Front Cover



Nirmal Seeds Pvt. Ltd.

(An ISO 9001:2015 Certified Company)

Agri Bio-tech for Healthy Nation



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Front Inner

Nirmal's new high-tech "class 10000" laboratory for mass multiplication of Mycorrhizae by "ROC" technology established at Pachora



Newly established Bio Manufacturing Unit of Nirmal Seeds Pvt. Ltd. in Gujarat



Bio-Organic Inputs



Bio-Organic Inputs

Bio-Power Gold (A Mycorrhizal Bio fertilizer)

Composition: Product contains propagules of consortium of three *Glomus* spp. of Mycorrhizae developed by Root Organ Culture (ROC) technique.

Carrier : Clay Mineral granules

Benefits of Bio Power Gold (Mycorrhizal Biofertilizer)

- It increases root proliferation thereby, increase in nutrient & water uptake.
- It improves the soil health and mobilizes nutrients in general & especially phosphorus to plant.
- It increases crop yield and improves keeping quality of the produce .
- It imparts biotic and abiotic stress tolerance to the crop plants.
- Significant reduction in chemical fertilizer doses.

Direction for use :-

- Use Bio Power Gold for soil application.
- It is recommended to be used alone near root zone or it can be mixed with FYM @ 25 kg /hectare

Recommended crops :

Paddy, Sugarcane, Wheat, Oil Seed & Pulses, Onion, Potato, Chilli, Soybean, Grapes, Apple, Citrus, Cotton, Maize and Vegetables (excluding cruciferous vegetables and mustard).



Nirmal's Rizamica

A Mycorrhizal Bio fertilizer based on innovative “ROC” technique

Composition: 1. Product contains consortium of three *Glomus* spp of Mycorrhizae as a propagules developed by Root Organ Culture (ROC) technique.

2. **Total viable propagule per gramme of product :** 2000 propagule/g

3. **Form/Base :** Fine powder (Water soluble)

4. **Moisture % maximum :** Not more than 12%

5. **pH :** 6 to 7.5

6. **Infectivity Potential :** As per FCO (1985)

Benefits of Rizamica :

1. Improve plant root growth and development
2. Increase the uptake and mobilization of phosphate & micro nutrients in all crops
3. Effective in overcoming the stress condition like drought, disease incidence etc.
4. Enhances yield & quality
5. Mycorrhizal filaments produces humic compounds and it enhances the water holding capacity of soil & makes more air permeability in the soil.

Direction of Use :

1. Use **Rizamica** through drip irrigation system/drenching or soil application.

Dosage : 250 g /hectare (100 g/acre) through drip irrigation. Mix 100g **Rizamica** in 200 to 500 litre of water & apply for 1 acre area. It is also recommended for soil drenching with or without organic manure.

Recommended Crops :

Paddy, Sugarcane, Banana, Wheat, Oil Seed and Pulses, Onion, Potato, Chilli, Soybean, Grapes, Apple, Citrus, Cotton, Maize and Vegetable crops. (Excluding cruciferous plants)

Caution : Store in cool and dry place. Not recommended for cruciferous crops.



Bio-Organic Inputs

Bio-Power granules (Organic Extract) Soil Enricher

Bio-Power is developed from desirable and beneficial, inactivated Microbial Extract (Bacterial) using advanced biotech process. It contains Bio Amino acids, soluble Proteins etc.

Advantages of Bio-Power :

Being a **Organic Extract**, it improves the soil condition and mobilizes nutrients to plant.

Bio-Power Granules are recommended to be used alone near root zone or it can be mixed with FYM or fertilizers.

Composition:

Contains soil beneficial, inactivated Microbial Extract (Bacterial). It also contains Amino acids, Proteins, Macro and Micro elements.

Direction for use :

1. Use **Bio Power** for soil application.
2. Bio Power can be applied in soil alone or while application it can be mixed with FYM or chemical fertilizers

Time of Application :

1. Apply Bio Power 2.5gm/m² of Nursery @ time of nursery sowing.
2. After transplanting apply Biopower @ 10kg/acre as basal dose or as top dressing along with chemical fertilizers or FYM.

Method of Application :

1. Broadcasting - mix with fertilizers or FYM for cereal crops.
2. Ring method - Near root zone mixed with fertilizers for well spaced crops.

Recommended crops and doses :

SR	Group	Crops	Does per ha
1	Vegetables	Brinjal, Chilli, Tomato, Okra, Capsicum, Onion and all kinds of Vegetable	25 kg/ha
2	Cereal	Paddy, Maize, Wheat and all kinds of Cereal crops	25 kg/ha
3	Oil Seeds	Mustard, Toria, Soybean, Sasamum, Sunflower, Safflower, Castor and all kinds of Oil seeds	25 kg/ha
4	Pulses	Green Gram, Black gram, Red Gram, Chickpea,Pea and all kinds of Pulses	25 kg/ha
5	Perennial Crops	Tea, Coffee,Coconut, Arecanut etc.	65 kg/ha
6	Horticultural Crops	Banana, Pomegranate, Mango, Papaya, Grapes, Citrus, Jamun, Apple & all types of fruit.	50-55 kg/ha



Bio-Organic Inputs

Nirmal Bio Power (Organic extract) (Soil Enricher)

Bio-power is developed from desirable and beneficial inactivated multi bacterial extract, fortified with blue green algae extract using advanced bio-tech process. It contains bio amino acid, proteins, macro and micro elements etc.

Mode of action:

Bio Power acts on dividing cells of roots, increases secondary and tertiary roots and also increases root hairs, so that nutrients and water from the soil are absorbed efficiently and easily.

Benefits of Bio power :

- It increases secondary and tertiary root hairs (feeding roots) thereby increases availability of nutrients to the plants for better growth and development.
- Improves crop stand in different soils
- Increase the yield and improves the quality of produce
- It imparts tolerance for abiotic and biotic stresses in different crops.
- Improve shelf life and improve transportability of produce.

Direction for use: Bio Power is available in liquid as well as granular form. Add 2ml of liquid Bio Power in 1 lit of water, drench soil near root zone of plant. Bio power can be applied through drip irrigation system @ 3 to 5 Liter per acre. Bio Power Granules is recommended @ 15 to 25 kg per acre alone near root zone or it can be mixed with FYM or Fertilizers.

Recommended crops:

Vegetables, Fruit crops, Cereals, Pulses, Sugarcane, Onion, Cotton and Paddy etc.



Bio-Force (Organic extract) (Growth Enhancer)

Bio-Force is developed from natural extract of blue green algae and sea weed using advance biotech processes. It contains bio amino acids, protein etc.

Benefits of Bio-Force:

- Increases total chlorophyll content, number of leaves and leaf area, which results in increase in better Photosynthesis
- Significantly increases the fruit set, fruit size and thereby increase in yield
- Improves shelf life of fresh fruits, vegetables and flowers
- Improves quality of produce
- It imparts tolerance for biotic and abiotic stresses in different crops

Direction for use:

Spray Bio-Force @ 2ml / Litre of water. Spray until complete drenching of leaves. Initial spraying should be given a week after germination, followed by three foliar sprays at pre-flowering, flowering and post-flowering stages to ensure expected results.

Recommended crops:

Bio-Force is recommended for all types of crops like Cereals, Pulses & Vegetables.



Bio-Organic Inputs

Berrylon (Fruit & Veg.) (Organic extract)

Berrylon (Fruit & Veg.) is developed from natural extract (concentrate) of the blue green algae & sea weed extract using advanced bio-tech processes. It is an organic extract for yield maximization and quality improvement of various crops. It contains bio amino acid and proteins etc.

Benefits of Berrylon:

It promotes plant height.

It increases the number of leaves and leaf area and total chlorophyll contents significantly which helps for better photosynthesis.

Early flowering and fruiting therefore early harvest.

Significantly increases the fruit set, fruit size and yield.

It improves shelf life of produce.

Direction for use:

A) For fruits and vegetables - 1ml/ lit. of water. Spray uniformly on plants, first spraying should be given a week after germination, followed by three foliar sprays at pre-flowering, flowering, post flowering and fruit / pod development stages to ensure expected results.

Recommended crops:

Grape, Mango, Banana, Pomegranate, Citrus fruits, Chiku, Papaya, Guava etc.

Vegetables like tomato, chilli, brinjal, capsicum, cucurbits, beans, leafy vegetables etc.



Bio Sanjivani Antagonistic Microbes

Bio Sanjivani is wettable powder Formulations. It is combo pack product. It contains each packet of *Trichoderma viride* (Bhuparis Tricho) and *Pseudomonas fluorescens* (Bhuparis *Pseudomonas*). It is effective against different plant pathogenic fungi and bacteria.

Benefits: Effectively controls wilt complexes caused due to pathogenic fungal, bacterial and nematodal pathogens. It is highly effective for control of soil borne pathogens such as *Fusarium* spp, *Rhizoctonia*, *Pythium*, *Phytophthora*. It also controls foliar diseases like Bacterial Leaf Blight (BLB) of paddy and pomegranate. Eco friendly and no harmful residues left over on fruits and vegetables.

Direction for use:

Seed treatments - Mix 5 gm culture from each packet of Bio Sanjivani in 25 ml of water and coat for 1 kg of seed just before sowing. **Soil treatments** - Mix 500 gm culture from each packets of Bio Sanjivani in 100 kg FYM or Organic Manure and broad cast over one acre. **Soil drenching** - Mix 500 gm culture from each packet of Bio Sanjivani in 200 lit. of water along with 500 gm jaggery and drench the solution near root zone. **Seedling treatment** - Make solution of Bio Sanjivani by taking 15 gm from each packet per liter of water. Dip the roots of seedling for 20 minutes just before transplanting.

Recommended crops:

Patato, Tomato, Capsicum, Brinjal, Chilli seedlings, Pigeon pea, Cotton, Sugarcane, Rice, Groundnut, Pomegranate, Papaya, Banana, Guava etc.



Bio-Organic Inputs

Bhuparis Tricho (*Trichoderma viride* 1% WP)

Antagonistic Fungi

Bhuparis Tricho is a formulation of antagonistic fungus *Trichoderma viride*. It Control the fungal pathogens by Nutrient Competition, hyper parasitization, It is effective on the fungal diseases viz, wilts, stem rot, root rot, damping off etc., caused by *Fusarium Oxysporum*, *Rhizoctonia*, *Pythium*, *Phytophthora*, *sclerotium* etc.

Benefits:

Effectively suppresses wilt, root rot, damping off diseases of cereals, pulses, vegetables and fruit crops.

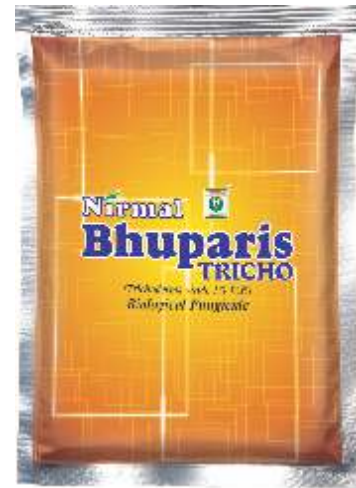
It is non hazardous and eco friendly.

Direction for use:

Seed treatments - Mix 10 to 15 grams of Bhuparis Tricho in 25 ml of water and apply it for 1 kg of seed just before sowing. The plantlets of Banana, Papaya, Oranges and Mosambi should be dipped in solution.

Soil Application - Mix 2-3 kg of Bhuparis Tricho in 5 to 10 ltr. of water and mix the solution in 100 kg FYM and keep it for overnight. Use the mixture next day for 1 acre of field by applying it in the root zone of the plants. Generally apply Bhuparis Tricho 2 - 3 times in affected crops.

Drenching method - (For Pomegranate, Oranges, Vegetables, Cotton etc). Mix 3-4 kg of Bhuparis Tricho in 200 ltr. of water. Drench the solution by ring method in the rootzone of Horticulture crops, Cotton, Vegetables etc., pour the solution near root through spray pump without using nozzle. Use about 10-15 ltr. of the solution for every adult plant.



Bhuparis Pseudomonas (*Pseudomonas fluorescence* 0.5% WP)

Antagonistic Bacteria

Bhuparis Pseudomonas is a powder formulation of *Pseudomonas fluorescence* bacteria. Bhuparis Pseudomonas is effective against wide variety of seed and soil borne diseases like bacterial leaf blight of rice, damping off disease, seedling rot of black gram, leaf spot of groundnut etc. It secretes antibiotics such as Pyco-cyanin and Phenazine, which inhibit the growth of disease causing pathogens.

Benefits:

Protects wide range of plants from disease causing, fungal, bacterial Pathogens.

It promotes plant growth by producing growth promoting factors.

Method of application:

Seed treatments - Mix 10 gram of Bhuparis Pseudomonas in 25 ml of water to make a slurry. Use it for seed treatment. Dry the treated seed under shade and then use for sowing.

Soil application - Mix 2 kg of Bhuparis Pseudomonas in 5 lit. of water and mix the solution in 100 kg of FYM. Broadcast it over one acre of field near root zone of the plants.

Drenching method - (For Pomegranate, Oranges, Vegetables, Cotton etc). Mix 1 kg of Bhuparis Pseudomonas in 200 lit. of water. Drench the solution by ring method in the root zone of the plants. Use about 10-15 lit. of the solution for every plant.

Foliar Application - Make a paste of 1 kg of Bhuparis Pseudomonas in small quantity of water, add this paste in 200 lit. of water & spray in one acre field during early hours or late evening period.



Bio-Organic Inputs

Bio Pick Up Dx (Potash mobilizing bacteria)

Bio Pick Up Dx is dextrose base formulation of potassium mobilizing bacteria. Most of the Potash exists in soil in unavailable form. Potash mobilizing bacteria secrete different organic acids and enzymes that help to solubilize fixed potassium into exchangeable form and make it available to plants.

Benefits of Pick Up Dx:

Bio Pick Up Dx is effectively mobilizes unavailable potassium ions and makes it available for plants.

It helps to regulate opening and closing of stomata and minimize water losses through reducing the transpiration rate.

It Imparts stress or drought tolerance and improves quality of produce.

It imparts tolerance to biotic stresses & improves shelf life of the produce.

It helps to increase yield to the extent of 15 to 20% in various crops.

Being a dextrose base it can also be applied through drip, irrigation system.

Method of Application:

Seed Treatment - Mix 10 gm Bio Pick Up Dx in sufficient quantity of water, so as to make thick slurry. Treat 1 kg seeds with this slurry. Dry the treated seeds under shed and then use for sowing.

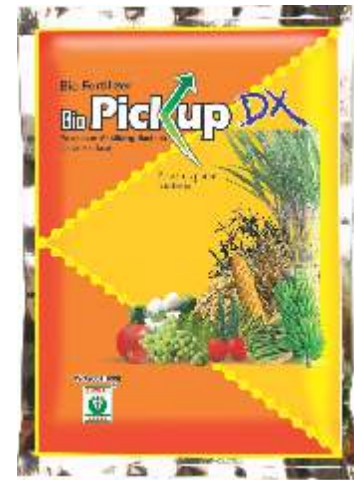
Seedling treatment - Mix 100 gm Bio Pick Up Dx in sufficient quantity of water and dip the roots of seedlings for 5-10 minutes before transplanting.

Soil Application - Mix 1 kg to 3 kg Bio Pick Up Dx in 50 lit. of water, mix thoroughly in 100 kg of FYM and then broadcast the mixture in one acre area before sowing. (7.5 kg Bio Pick Up Dx / 125 lit. water / 250 kg FYM / ha).

Drenching Application - Mix 3 to 5 kg Bio Pick Up Dx in 500 lit. of water and use this solution for drenching near root zone of crops for one acre area.

Recommended crops:

Bio Pick Up Dx is recommended for all types of crops, such as fruits, vegetables, plantations, sugarcane, cotton, cereals, oil seeds and pulses.



Sniper-WP

ENTOMOPATHOGENIC NEMATODE (*Heterorhabditis indica*)

EPN

Contains : 75,000 - 1,00,000 IJs/g

Recommended Pests :

Sniper effectively controls Whitegrubs, Armyworms, Cut worms, Root grubs, Termites, Larvae of Fall armyworms, Spodoptera, Grubs of weevils etc.

Recommended crops :

Sniper can be used for the crops like Sugarcane, Groundnut, Potato, Arecanut, Cardamom, Vegetables, Maize, Paddy, Sorghum & Horticultural crops etc.

Benefits of Sniper :

- 1) Sniper is eco-friendly biological pesticide.
- 2) It is safe for human being, environment and natural enemies.
- 3) It is target specific and residue free
- 4) Highly effective for control of above said pests
- 5) It is cost effective and farmers friendly

Direction for use :

Soil application: 10 kg/ ha (4 kg/ acre)

Foliar spray: 10 g/ Liter of water



Back Inner





Nirmal Seeds Pvt. Ltd.

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