Scale Up Your Agro Brand

with PBL as your Manufacturing partner

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PEPTECH BIOSCIENCES LTD.

PEPTECH BIOSCIENCES LIMITED

"Peptech Biosciences Ltd." a part of the Titan Biotech Ltd. Group, is a global player in Agriculture inputs with its comprehensive infrastructure and expertise in handling Agro products. The list of products is certified by the following organizations:

- International Organization for Standardization (ISO 9001:2015)
- Central Insecticides Board and Registration Committee (CIB & RC)
- Fertilizer Control Order (FCO), Rajasthan
- Organic certification by Rajasthan Organic CA
- OMRI Certified
- Member of CHEMEXCIL & PMFAI

At Peptech Biosciences Ltd., we believe in the power of innovation in everything we do, which is why we take holistic approaches in the field of research and development that are sustainable. Peptech provides ingenious, high-quality crop solutions like Biological Fertilizers, Pesticides, Stimulants, along with Synthetic Insecticides and PGRs. Its products are tailored to suit diverse agronomic conditions across India and global markets. The manufacturing process of all products is mechanized with extremely advanced technology, prime for quality production. We are well equipped with high-quality labs and manufacturing units by a strong team of tremendously qualified scientists who are continuously working to meet aspiration of our farmers, improve performance, and maximize outputs.
As one of the leading Biotechnology companies, our extensive experience in various arrays of nutraceuticals and microbiology has proven a successful foundation for us to spread our wings into the discipline of agriculture. Our success stems from the ability to customize our portfolio in response to local and global agronomic conditions. We thrive on working closely with consumers to help build better products, solutions, and services for a brighter tomorrow. It's our goal to make agriculture sustainable with our quality products.

Vision

"We work for B2B clients to expand their product portfolio with new and innovative agriculture solutions"

We aim to empower agricultural brands with reliable, high-quality crop solutions that drive long-term impact. Our vision is to be the preferred partner for agri-businesses worldwide, not just by delivering trusted formulations, but by co-creating value, supporting growth, and strengthening the agricultural ecosystem.

Rooted in a commitment to quality, consistency, and collaboration, we aim to build lasting relationships with every client, helping agriculture thrive, sustainably and responsibly.

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BIO-STIMULANTS

AMINO ACID MIXTURES

The Powerhouse of Plant Nutrition

Amino Acids are the compounds that are the structural units of proteins, each with its own amino group ($-NH_2$), acidic carboxyl group (-COOH), and organic R group (side chain). While there are hundreds of naturally occurring amino acids, only a core set of 22 comprises the standard genetic code used in protein translation. Amino Acid Mixtures are readily absorbed, transported, and utilized by plants as a source of nitrogen and carbon. They are building blocks of proteins, which are essential for all cellular processes, like cell division and growth. It saves the energy used by the plant to reduce organic matter, synthetic nitrates, and ammonia into amino acids and functions as a Bio-stimulants for the plants.

Benefits:

- Helps in the chelating and complexing of nutrients.
- All of the Amino Acid Mixtures are 100% water-soluble and leaves no residue.
- Stimulates nutrient uptake and increases the chlorophyll content in the leaves of the plants.
- Supports the energy balance of plants.
- Makes 18 kinds of amino acids available for quick absorption by plants.
- Increases biomass production and overall plant yield.
- Boosts crop's resistance to drought, salinity, and other stressful conditions that affect its yield.
- Improves flavours, firmness, and preservation of yield.

Recommended Crops and Dosage:

Formulations	Field Crops & Vegetables	Tree Crops	Grapes & Berries	Turf
Amino Acid Mixture 40% (Liquid)	200-400 ml per acre.	400-800 ml per acre.	200- 400 ml per acre.	400-800 ml per acre.
Amino Acid Mixture 50% (Powder)	300-500 gm in 200 ltr water per acre during periods of rapid growth or nutritional stress.	300-500 gm in 200 ltr water per acre after the beginning of active growth.	200-400 gm in 200 ltr water per acre after active growth begins.	150-200 gm in 200 ltr water per acre.
Amino Acid Mixture 80% (Powder)	150-200 gm in 200 ltr water per acre during periods of rapid growth or nutritional stress.	150-200 gm in 200 ltr water per acre after the beginning of active growth.	100-200 gm in 200 ltr water per acre after active growth begins.	150-200 gm in 200 ltr water per acre.

Compatibility: It is compatible with most of the agri-inputs.

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We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

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BIO-STIMULANTS

AMINO ACID MINERAL CHELATES

Rapid Nutrient delivery for Immediate impact

Amino Acid Mineral Chelates are specialized form of mineral nutrients. They are formed when elements like Magnesium, Iron, Boron, Calcium, Zinc, etc are chemically bonded to amino acids. This chelation creates a stable structure that's better able to survive the acidic environment in the soil micro flora. These Amino Chelated Minerals enhance the mineral's bioavailability and absorption by plants compared to non-chelated forms.

Available Formulations:

Zinc Amino Acid Zn-12%:
- Zinc is part of an enzyme that regulates the equilibrium among carbon dioxide, water, and carbonic acid.
- Zinc is found to be associated with water regulation in plants and improves water uptake.

Boron Amino Acid B-12%:
- Enhances regulation of plant hormone levels and support healthy growth.
- Increases flower production and retention, pollen tube elongation, and germination, and seed and fruit development.

Calcium Amino Acid Ca-12%:
- Required for root development during the plant's early growth stage.
- Calcium is a part of the cell division and the cell elongation process.

Calcium Boron Amino Acid C:B 6:1:
- Helps in pollination, fertilization, and the formation of healthy seeds and grains.
- Helps maintain the balance of sugar and starch in the plant and aids in their translocation, contributing to overall plant growth and development.

Copper Amino Acid Cu-12%:
- Promotes chlorophyll and protein synthesis while slowing plant aging, resulting in increased fruit and grain production.
- Assists in process of photosynthesis and helps plant with carbohydrates and protein metabolic pathways.

Ferrous Amino Acid Fe-12%:
- Plays a critical role in metabolic processes such as DNA synthesis, respiration, and photosynthesis.
- Involved in the synthesis of chlorophyll A & B and essential for the maintaining chloroplast structure and function.

Magnesium Amino Acid Mg-6%:
- Assists the plant at various stages of development and reduces severity of deficiency by aiding in absorption of other minerals.
- Captures the sun's energy for growth and production by facilitating photosynthesis.

Manganese Amino Acid Mn-12%:
- Plays a role in pollen germination, pollen tube growth, root cell elongation, and resistance against root pathogens.
- It also helps in maintaining subcellular homeostasis.

Molybdenum Amino Acid Mo-2%:
- Molybdenum is an essential component of two enzymes that convert nitrate into nitrite (a toxic form of nitrogen) and then into ammonia before it is used to synthesize amino acids within the plant.
- It is also needed by symbiotic nitrogen fixing bacteria in legumes to fix atmospheric nitrogen.

Recommended Crops and Dosage:

Crops	Dosage
Field Crops & Vegetables	200-400 gm/acre during periods of rapid growth or nutritional stress. The application can be repeated twice or more times during the growth season starting from bud to fruit setting.
Tree Crops	200-600 gm/acre after the beginning of active growth. The application may be repeated at 2 to 4 weeks intervals through the growth season.
Grapes & Berries	200-400 gm/acre after active growth begins. The application can be repeated at intervals of one week or more during the vegetative growth period starting from bud to fruit setting.

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AMINOFERT® GOLD

Rapid Nitrogen Provider

Aminofert® Gold is a water-soluble liquid nutritional balancer produced enzymatically from non-GMO plants with no adverse impact on the environment. The formulation contains more than 35% of amino acids from which plants will get at least 6.5% organic nitrogen and some concentration of carbohydrates. These amino acids are easily assimilable and enhance yield when sprayed at critical growth stages, e.g., tillering, branching, bud formation, and flowering stages. It also helps reduce the stress effects of drought and salinity by stimulating physiological and biochemical processes. It is compatible with both organic farming practices and conventional agricultural inputs.

Benefits:

- Provides essential micronutrients that support healthier growth and development.
- No phytotoxic effect on foliage or plant growth.
- It aids in cell division and supports the biosynthesis of natural growth hormones essentially needed by citrus and stone fruit trees.
- Supplies organic nitrogen, peptides, and amino acids directly or indirectly helping nitrogen metabolism, protein synthesis, enhancing chlorophyll content, photosynthesis, and carbohydrate synthesis.
- Improves mineral transport within the plant and helps reduce toxin buildup under stress conditions.
- Its application does not require any special equipment or gear and is compatible with majority of spray nozzles.

Product Composition:

Physical Parameters	Specifications
Appearance	Dark brown viscous liquid
Solubility	Soluble in Water
Chemical Parameters	**Specifications**
pH (2% soln at 25°C)	3.0 - 6.0
Total Amino Acid	NLT - 40.0%
Total Organic Matter	NLT - 50.0%
Essential Micronutrients	Positive

Recommended Crops and Dosage:

Crops	Dosage	Time of Application
Field crop & Vegetables	2-3 ml/ltr	1. Early vegetative stage, 2. Early flowering stage, 3. Fruit setting & development stage
Grapes & Berries	100-200 ml/acre	1. Early vegetative stage preferably after emergence of new shoots. 2. Flowering & fruit development stage
Tree crops	200-400 ml/acre	After break of dormancy and beginning of active growth. Repeat at the intervals of 2-4 week
Turf	150-200 ml/acre	Spray after leaf and root development and subsequently repeat at 15 days interval

Note: Apply the Amino Acid formulation at the beginning of the critical growth stages to enhance root and shoot growth. They can also be applied to nurseries and floriculture crops.

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BIO-STIMULANTS

AMINOFERT® 77

The Unstoppable force behind
Greener and Stronger Crops

Aminofert® 77 is a powerful, plant-based Bio-stimulant enriched with 18 essential Amino Acids. It rapidly promotes plant growth by supplying organic nitrogen, mitigating abiotic stress, and enhancing both yield and quality.

Benefits:

- Increases chlorophyll content in leaves, enhancing photosynthesis and resulting in healthier, greener crops.
- Encourages flowering and fruit setting, helping crops mature earlier with improved yield.
- Supports plants in recovering from stress caused by drought, heat, or nutrient deficiencies.
- Improves absorption and movement of nutrients in the plant by optimizing chelation.
- Activates key plant enzymes and stimulates ethylene production, which triggers stress tolerance mechanisms, enabling plants to withstand adverse conditions.

Product Specifications:

Characteristics	Specifications
Appearance:	Dark Brown
Natural Amino Acids (Hydrolysis of Protein)	68.5%

Recommended Crops and Application Stages:

Crops	Application Stages
Wheat, Peas, Chickpea & Pulses	1st spray: Before 1st irrigation (20–28 DAS) | 2nd spray: 40–50 DAS | 3rd spray: 65 DAS (Flag leaf)
Rice	1st: At nursery stage | 2nd: 20–30 DAS after transplant | 3rd: 40–50 DAS (Flag leaf stage)
Tomato, Chilli, Brinjal	1st: Pre-flowering | 2nd: At fruit setting and development
Potato	1st: When plants are 15 cm tall | 2nd: After 15 days | 3rd: At tuber initiation
Cabbage (All types)	1st: Just before transplanting | 2nd & 3rd: At 20-day intervals
Onion & Garlic	1st: Bulb development | 2nd: After 20 days
Melons & Gourds	1st: Pre-flowering | 2nd: At fruit setting and development
Citrus (Orange, Lemon, Mandarin, Grapefruit)	1st: Pre-flowering | 2nd: Fruit set | 3rd: Pea-size fruit & Fruit size 6–7 cm
Tropical Fruits (Banana, Mango, Grapes, etc.)	Apply 2–3 times during key stages like flowering, fruiting, colour change or after stress (heat, cold, hail, drought)
Lettuce, Spinach, Leafy Veggies	1st: 15–20 DAS | 2nd: 35–40 DAS

Dosage: 2-3 ml/ltr of water

Field Trials: The field trial of Aminofert® 77 was conducted on Maize at a reputed Agricultural University in India. In the trial, significant differences were observed between the treated and non-treated field.

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BIO-STIMULANTS

AMINOFERT® MMF

A highly impactful Micronutrient fertilizer

It is an amino acid-based, chelated consortium of micronutrients such as zinc (Zn), iron (Fe), manganese (Mn), copper (Cu), boron (B), and many more. It acts as a powerful combination for improved crop health and yields. It is a non-toxic formulation suitable for organic farming.

Benefits:

- Enhances micronutrient availability.
- Contributes to better photosynthesis, nutrient uptake, and overall plant vigour.
- Enhances fruit quality, colour, and shelf life.
- Suitable for a wide range of crops such as cereals, vegetables, and leafy greens.
- Proper application can improve pulp-to-peel ratio, fruit weight, and enhance the size, color, and quality of both fruits and vegetables.

Product Composition:

Composition	Parameters Specifications
Solubility (2% soln.)	Soluble in water
Zinc (Zn)	Min. 3.0%
Iron (Fe)	Min. 2.5%
Manganese (Mn)	Min. 1.0%
Copper (Cu)	Min. 1.0%
Boron (B)	Min. 0.5%
Molybdenum (Mo)	Min. 0.001%

Appearance	Light green color, free flowing powder

Recommended Crops:

It is recommended to be used during the early growth stages of field crops, fruits, vegetables, and flowers to increase yield and promote strong flower and bud formation.

Dosage & Application Method:

Method	Dosage	Time
Foliar spray	500 gm in 200 ltr of water	1st application at budding stage 2nd application at flowering or fruiting stage
Drip irrigation	1-1.5 Kg/acre	1st application at budding stage 2nd application at flowering or fruiting stage

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BIO-STIMULANTS

CROP TIGER

R&D backed solution for Efficient Farming

Crop Tiger is a uniquely designed formulation for improved crop productivity. This nutritive bio-solution is a thoughtfully crafted blend of Kelp Extract, Amino Acids, Potassium Oxide, and Multi-Vitamins. It is a versatile product; therefore, it can be used on various crops to obtain assured positive results. It is a brown-coloured free-flowing powder that has shown proven results in increasing an incredible amount of crop yield. In addition, it has shown promising results in enhancing crop immunity and strength. It also boosts the beneficial microflora of the soil.

Benefits:

1. Improves photosynthesis and enhances the overall plant growth rate.
2. Stimulates beneficial microbes around the plant roots and allows better absorption of water and minerals.
3. Provides the plants with the right balance of nutrition and builds strength to tolerate biotic & abiotic stress.
4. Delays plant aging (senescence) and extends the production phase.
5. Boosts plant immunity, promoting resistance to diseases and reducing chemical use.

Product Composition:

Composition	Parameters Specifications
Multi Vitamins	Min. 1%
Plant Extract (Kelp Extract)	Min. 30%
Amino Acids	Min. 14%
Potassium Oxide	Min. 15%
Organic Matter	Min. 30%
Filler	Min. 10%

Application Method: Foliar Spray, Soil Drenching

Recommended Crops, Dosage and Application Stage:

Crops	Dosage	Application Stage
Field crop (Paddy, Wheat, Barley)	1 Kg/Acre	1st application at puddling | 2nd application at tillering or boot formation
Fruit Tree (Banana, Citrus)	2 gm/Plant	1st as soil drenching | 2nd as foliar spray @2 gm/ltr at vegetative 3rd as foliar spray @2 gm/ltr at bud or flowering
Vegetables (Potato)	1 Kg/Acre	At field preparation
Pulses	1 Kg/acre	1st application at field preparation | 2nd at flowering and pod formation stage
Plantation Crop (Sugarcane)	1.5-2 Kg for soil application 2 gm/ltr for foliar spray	1st application at field preparation 1.5-2 Kg | 2nd as foliar spray 1.5 month before harvesting

Field Trials:

The field trials of Crop Tiger were conducted on Bananas, Sugarcane, and Rice at a reputed Agricultural University in India. In the trials, significant differences were observed between the treated and non-treated crops.

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BIO-STIMULANTS

POTASSIUM HUMATE

Organic Power for Soil health

Potassium Humate is made from natural, high-grade Leonardite. It is a high-quality plant stimulant and soil conditioner with a high concentration of humic acid. It can be stored at ambient temperature and transported easily without loss of quality. Its solubility is excellent, and it can be formulated with different fertilizers and pesticides. It can be used for compound fertilizer production, irrigation, and foliar spray. It can be applied to landscapes and gardens, as well as agricultural and horticultural plants.

Benefits:

- Promotes fertilizer efficiency by improving soil structure.
- Increases and improves the water holding and cation exchange capacities.
- Binds certain heavy metals and pesticide residues, reducing their availability and potential harm to plants.
- Helps buffer the adverse effects of hard water on nutrient availability and uptake.
- Stimulates healthy plant growth and seed germination.
- Promotes rapid root growth and development.
- Increases nutrient uptake by plants through their leaves and roots.
- Improves the effectiveness of pesticides.
- Increases yield and improves the quality of plants.

Recommended Crops:

Suitable for use in cereals, vegetables, fruits, pulses, and oilseeds.

Dosage and Application Method:

Product	Method	Timing	Dosage
Potassium Humate 98% (Tech.) Powder/Flakes	Drip, Foliar Spray and Drenching	2-3 times during vegetative and fruit growth stages.	0.5-1 g/ltr for foliar spray 1-1.5 Kg for soil application per acre
Potassium Humate 40%	Drip, Foliar Spray and Drenching	3 Times at every 20 days from the time of sowing	1 ml/ltr of water
Potassium Humate 20%	Drip, Foliar Spray and Drenching	3 Times at every 20 days from the time of sowing	2 ml/ltr of water

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BIO-STIMULANTS

FULVIC ACID 50% / 80%

Boosts Nutrient Uptake

Fulvic Acid is a water-soluble, yellow-brown powder derived from high-quality humic substances. With its low molecular weight, it is highly bioavailable and easily absorbed by plants. It aids key metabolic processes and acts as a chelating agent, helping plants access essential micronutrients more effectively. Fulvic Acid can be applied through both soil and foliar routes, and supports overall plant vigor, especially under stress conditions.

Benefits:

- Boosts nutrient uptake in plants.
- Stimulates plant growth and vitality.
- Acts as a chelating agent for gradual nutrient absorption.
- Enhances overall plant health and vigor.
- Increases buffering properties of soil.
- Help plants to cope with environmental stress.

Recommended Crops:

Suitable for all crops: Paddy, Wheat, Maize, Groundnut, Sugarcane, Grapes, Pomegranate, Citrus, Banana, Tea, Coffee, Coconut, Vegetables, and Flowers.

Dosage & Application Method:

Product	Method	Dosage	Timing
Fulvic Acid 50%	Foliar spray, Soil drenching	250 gm/acre	The application should occur 2 to 4 times throughout the growth cycle, and it's recommended to use it both before and after the flowering stage.
Fulvic Acid 80%	Foliar spray, Soil drenching	150-200 gm/acre	

Note: Soil drenching will help in enhanced germination, root health, improved nutrient absorption leading to enhanced chlorophyll synthesis.

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BIO-STIMULANTS

RDB POWDER

The Perfect Start for every plant

RDB Powder is an advanced, water-soluble formulation that promotes the rapid development of roots and shoots in seedlings, cuttings, transplanted crops, and direct-seeded crops. It is non-phytotoxic and suitable for use via foliar spray, soil drenching, drip irrigation, and fertigation systems.

Benefits:

- Promotes rapid root and shoot development for robust early growth.
- Ensures quick and healthy establishment of seedlings and transplants.
- Enhances nutrient uptake and improves nutrient use efficiency.
- Strengthens plant resilience against abiotic stresses like drought and heat.
- Fully water-soluble and easily compatible with most traditional and organic agricultural inputs.

Product Composition:

Composition	Specifications
Humic Acid	30%
Amino Acid (Glycine)	7%
Myoinositol	2%
Vitamin C	12%
Vitamin E	0.2%
Total Organic Carbon	25%

Recommended Crops:

Paddy, Wheat, Sugarcane, Tomato, Chilli, Brinjal, Cabbage, Cauliflower, Onion, Garlic, Grapes, Okra, Melons, Capsicum, Gourds, and more.

Dosage and Application Method:

Crop Type	Dosage	Time	Method
For nursery	1 gm/ltr water	After germination or 7-10 days before transplanting	Foliar spray or soil drenching
For transplanted crop	100 gm/acre	7-10 days after transplanting. 2 application at 20-30 days interval	Foliar spray or soil drenching
For direct sown crops	100 gm/acre	14-21 DAS 2 application at 20-30 days interval	Foliar spray or soil drenching
For fruit crops	100 gm/acre	Pre flowering 2-3 application 30-60 days interval	Foliar spray or soil drenching

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BIO-STIMULANTS

SEAWEED EXTRACT 20% / 30%

The Liquid Boost from the Brown Algae

Seaweed liquid is derived from the fermentation of seaweed by deploying a cold process, in which microbial organisms rupture the cell wall and release the Bio-Stimulant substances into the broth. Seaweed liquid helps in optimizing vegetative growth in the initial phases of crop growth. It promotes better tillering, vegetative growth, root growth and nutrient uptake. It also provides resistance to plants against drought conditions. Seaweed liquid activates the soil bacteria, especially rhizosphere bacteria which are responsible for better growth of root system. Seaweed liquid is used as an effective foliar spray and soil application product.

Benefits:

- Boosts crop nutrition and ensures plants receive essential nutrients e.g., nitrogen, phosphorus, potassium, and trace minerals for optimal growth. This, in turn, leads to increased crop yield.
- Contributes to improved plant health by fostering robust root growth.
- Enhances fruit characteristics, including the number, shape, size, uniformity, colour, and taste.
- Increases flower production and improves flower retention.
- Acts as a substrate for beneficial microorganisms and contributes to a healthier soil environment.
- As a metabolic enhancer, stimulates crop growth and development.
- Improves crop quality, stress tolerance, and resistance to pests and diseases.

Recommended Crops:

Suitable for all crops: Cotton, Cumin, Opium, Jute, Sugarcane, Rice, Wheat, Sorghum (Jowar), Bajra, Arecanut, Coconut, Coffee, Rubber, Tea, Mulberry, Cocoa, Red Gram, Green Gram, Black Gram, Horse Gram, Bengal Gram

Dosage & Application Method:

Product	Method	Dosage	Time
Seaweed 20%	Foliar application	2.5-5 ml/ltr	• Tillering/Branching Stage • Pre-flowering Stage • Post-flowering Stage
Seaweed 30%	Foliar application	2.5 ml/ltr	

Available Technical:

Seaweed Extract (Available as Flakes & Powder)

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BIO-FERTILIZERS

MYCORRHIZAE

(Rhizophagus irregularis / Glomus intraradices)

To grow Strong Roots and More Yields

Mycorrhizae are fungi that have a symbiotic relationship with the roots of 90% of plant species on earth. They are environmentally friendly, phosphate-solubilizing, and nutrient-mobilizing organisms. This product containsVesicular Arbuscular Mycorrhizal (VAM) , which include both Ecto- and Endo-Mycorrhizae classified based on their mode of root association. The mycorrhizal association is mutually beneficial: the fungi assist plants in nutrient and water absorption, while receiving carbohydrates in return. These fungi also help activate the plant's immune system by triggering the production of phytoalexins, compounds that act at infection sites to limit the spread of disease. Additionally, other biochemicals produced by the fungi enhance resistance, minimizing losses due to biotic stress. Their interaction with beneficial soil bacteria further strengthens plant protection against pathogens.

Mycorrhizae also enhance soil fertility and improve water-holding capacity. By releasing enzymes into the soil, they make hard-to-access nutrients such as organic nitrogen, phosphorus, iron, and other bound minerals available to plants.

Benefits:

- Increases the surface-absorbing area of roots by 100 to 1000 times.
- Healthier and denser root systems.
- Improved ability to absorb nutrient from the soil.
- Significantly lower need for irrigation.
- Improves tolerance to drought and salt and prevents nutrient imbalance.
- Increases plant resistance to pathogens and fungal diseases caused by *Fusarium* and *Phytophthora*.
- Reduces the use of DAP by up to 40% in a single season.
- Decreases the mortality rate of the plant after transplantation.
- Improves organic matter and soil structure with Glomalin.

Mycorrhizae GR (1200 IP/gm)

Enhanced Performance with Root Development Base.
This is a microbial-based root stimulator enriched with organic nutrients. These nutrients boost the performance and effectiveness of Mycorrhizae in soil. It is coated on bentonite granules with 10 spores/1200 IP/g.

Concentrated Mycorrhizae (3500 IP/gm)

Concentrated Mycorrhizae with Root Development Base.
A high-quality microbial fungus enriched with a large amount of plant growth stimulant. It is an excellent yield enhancer for crops and boost growth rapidly. Concentrated Mycorrhizae is an advanced formulation plant supplement that promotes the growth of seedlings, cuttings, transplants, and direct sown crops. Mycorrhizae are non-phytotoxic and can be used for soil or foliar applications. It can be applied through drip irrigation, fertigation, or sprayer systems. This formulation is in powder form with 3500 IP/gm.

Recommended crops:

Cereal Crops: Rice, Bajra, Wheat, Maize, Oats, Barley, Rye, Millets, Sorghum, etc.
Fruit Crops: Banana, Avocados, Apple, Guava, Mango, Orange, Papaya, Grapes, Pomegranate, Dragon Fruit, Watermelon etc.

Dosage & Application Method:

Product	Dosage	Method
Mycorrhizae GR (1200 IP/gm)	4 Kg/acre	Broadcasting at early stage of crop growth
Conc. Mycorrhizae (3500 IP/gm)	100-200 gm/acre	Soil application, seed treatment, root treatment

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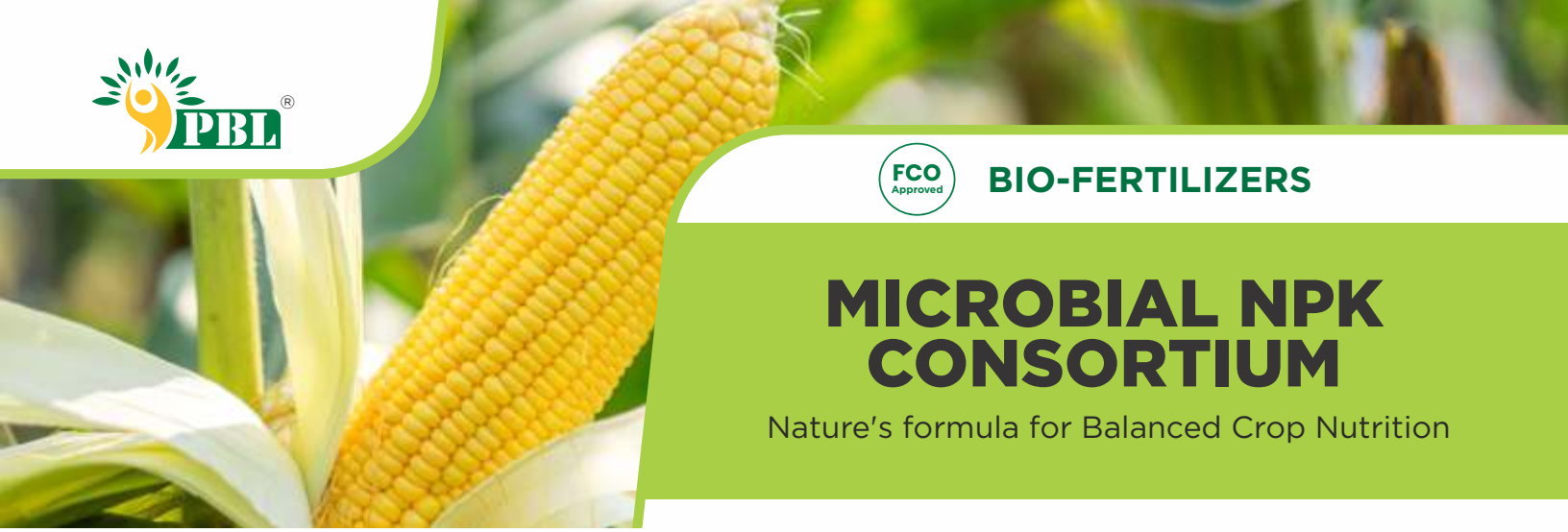

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BIO-FERTILIZERS

MICROBIAL NPK CONSORTIUM

Nature's formula for Balanced Crop Nutrition

CFU: Minimum $1.5x10^8$ CFU/ml

Microbial NPK Consortium is an effective Bio-Fertilizer that harnesses the power of beneficial microbes to unlock the full potential of soil and crops. It is a consortium of three microorganisms: Nitrogen-fixing bacteria (NFB), Phosphate-solubilizing bacteria (PSB), and Potassium-solubilizing bacteria (KSB). NFB converts atmospheric nitrogen into a plant-usable form; PSB breaks down unavailable phosphate reserves in the soil; and KSB liberates fixed and residual potash within the soil. It is an eco-friendly solution that supports sustainable agriculture.

Benefits:

- Fosters a thriving ecosystem within the soil.
- Improves soil fertility.
- Ensures crops have a balanced supply of essential elements.
- Ensures essential elements are readily available.
- Enhances nitrogen utilization apart from reducing conventional dose of chemical fertilizers.
- Boosts germination, growth and vigour of seedling.
- Helps plants cope with dry conditions by promoting water use efficiency.

Recommended Crops:

Suitable for all crops: Paddy, Wheat, Maize, Groundnut, Sugarcane, Grapes, Pomegranate, Citrus, Banana, Tea, Coffee, Coconut, Vegetables, and Flowers.

Dosage and Application Method:

Method	Dosage/acre
Seed treatment: Mix them using a small quantity of water and dry under shade before sowing	10-15 ml/Kg
Drip irrigation: Apply with 100 ltr of water of an acre at the early growth stage of crop.	0.5-1 ltr
Soil application: Mix with 50 Kg of FYM/Organic manure/Vermicomposte store the mixture under shade for 8-10 days than broadcast	1 ltr
Through irrigation channel: Apply with 500 gm molasses per 100 liters of water per acre. Mix well and store the mixture for three days with 2-3 times stirring daily, before applying at the early growth stage of the crop.	1 ltr

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

BIO-FERTILIZERS

POTASH DERIVED FROM RHODOPHYTES

Clean, Sustainable, and Effective

It is a Biofertilizer derived from Rhodophytes (Red algae), offering a natural, eco-friendly source of plant available potassium. It is ideal for improving crop quality, yield, and plant health without the unwanted residues of chemical fertilizers and its leaching into soil.

Benefits:

- Supplies plants with bio-available potassium essential for growth, flowers, fruits and productivity.
- Enhances biomass production, leading to stronger and healthier plants.
- Improves fruit quality, size, shelf life and marketability.
- Boosts crop yield by supporting key physiological functions.
- Increases nutrient use efficiency, reducing the need for synthetic inputs and making it compatible with Organic cultivation.
- Promotes overall plant growth and resilience.
- Safe for earthworms and environment – no harmful residues or ecological damage.

Product Composition:

Composition	Specifications
Water soluble potash content	20%
Minimum total sulphur	1.5%
Moisture content	5%

Recommended Crops:

Suitable for use in cereals, vegetables, fruits, pulses, and oilseeds.

Dosage and Application Method:

Method	Dosage	Time
Foliar spray for rapid and effective nutrient uptake	48 gm in 100-200 ltr of water for an acre	Vegetative, Flowering, and Fruit set stages 2-3 applications per crop cycle at 15-20 days interval to enhance the size, shape, color, and luster of fruits, and also improve their shelf life.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

BIO-FERTILIZERS

Harness the Power of Beneficial Microbes to fortify crops

Bio-Fertilizers contain living microbial organisms that grow in the plant's rhizosphere (around the root zone) and help in plant growth by solubilizing and mobilizing nutrients to rootlets for absorption. The Bio-Fertilizers include various symbiotic or free-living microorganisms (e.g., bacteria and fungi) that colonize the rhizosphere, and the root promotes their growth by increasing the availability of primary nutrients to the host plant.

Mode of Application: Seed Treatment, Soil Drenching, Soil Application, and Drip irrigation

Bacterial formulations:

CFU: Minimum 5×10^7 CFU/gm & 1×10^8 CFU/ml

1. NITROGEN FIXING BACTERIA (NFB)

Nitrogen Fixing Bacteria are either symbionts or free-living organisms. They convert inert atmospheric N_2 convert inert nitrates, nitrites, or ammonia, that are absorbed by plants for their growth through nitrogen assimilation. Using symbionts in crop rotation ensures nitrogen fixation in soil for succeeding crops.

2. PHOSPHORUS SOLUBILIZING BACTERIA (PSB)

Phosphate Solubilizing Bacteria belong to the group of organisms composed of actinomycetes, bacteria, fungi, arbuscular mycorrhizae, and cyanobacteria capable of hydrolyzing organic and inorganic phosphorus into soluble forms, thus making it bioavailable to plants. After plants and then: PSBs also contribute to the production of plant growth-promoting substances like indole-3-acetic acid (IAA) and gibberellic acid (GA). The application of PSB reduces the use of chemical phosphatic fertilizers.

3. POTASSIUM SOLUBILIZING BACTERIA (KSB)

Potassium Solubilizing Bacteria (KSB) convert fixed, unavailable forms of potassium in the soil into plant-available forms through mechanisms such as acidolysis, chelation, ion exchange, complexolysis, and organic acid production. These bacteria improve potassium uptake, which is essential for enzyme activation, water regulation, and photosynthesis. As a result, KSB promote healthier plant growth and contribute to better yield.

4. ZINC SOLUBILIZING BACTERIA (ZSB)

Zinc-Solubilizing Bacteria (ZSB) act as natural bio-fortifiers by converting unavailable forms of zinc into plant-available forms through the secretion of organic acids, siderophores, and chelating compounds. Zinc is an essential micronutrient that functions as a cofactor for several enzymes involved in photosynthesis, respiration, and carbohydrate metabolism. It also plays a key role in nutrient uptake, seed production, seedling vigor, and flower and fruit formation, contributing to overall plant health and productivity.

Fungal formulation:

Spore count: Minimum 1×10^6 spores/gm & 1×10^7 spores/ml

PHOSPHATE SOLUBILISING FUNGI (PSF)

Phosphate Solubilising Fungi are specifically chosen for their ability to convert insoluble forms of phosphorus in the soil into a soluble form that plants can readily absorb. These fungi release organic acids (like citric acid, oxalic acid, gluconic acid) into the soil. These acids lower the pH in the rhizosphere and chelate cations bound to phosphate, thereby solubilising phosphate. This process enhances phosphorus availability, promoting healthy root development and overall plant growth, especially in phosphorus-deficient soils.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

SPECIAL FERTILIZERS

SOLUBLE SILICA WITH POTASSIUM

The Power duo for Healthy Growth

Soluble Silica with Potassium (Potassium Salt of Silicic Acid) is a source of highly soluble potassium and silicon ions. It is available in 100% Water Soluble Powder & Liquid form.

Benefits:

- Applicable in any season when the plant requires the potassium ion and is readily absorbed by the plant
- Compatible with practices of Integrated Pest Management (IPM).
- Safe for beneficial arthropods and plants.
- Protects the plant by creating a protective barrier and strengthening the cell wall.
- Reduces climate stress on crops and improves crop quality.
- Provides resistance to mineral stress.
- Improves photosynthesis and raises Brix in all plants for fruit ripening, which corrects mineral deficiencies.
- Improves plant growth and increases yield and quality.
- Reduces lodging by strengthening the cell wall.
- Enhances reproduction by improving pollination and increasing pollen fertility.

Available Formulations:

Form	K_2O	SiO_2
Powder	28-30%	58-60%
Liquid	12-15%	26-28%

Efficacy:

The application of Soluble Silica with Potassium is effective in potatoes, rice, and sugarcane. When it is applied every week during the crop cycle, it results in increased sugar content and impressive yield increase of 20-25%.
Silica controls diseases in Rice, Soyabean, and Sorghum by reducing the presence of brown spots, and it also manages rust disease.

Recommended Crops:

Oilseed Crops, Legumes, Grain Crops, Root Crops, Cucurbits, Cole Crops, Leafy Vegetables, Woody and Herbaceous Ornamentals, Deciduous Fruits, Tropical and Subtropical Fruits, and many other crops.

Dosage and Application Method:

Product	Method	Dosage
Powder	Foliar spray	300-400 gm in 200 ltr of water
Liquid	Foliar spray	800-1200 ml in 200 ltr of water

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

SPECIAL FERTILIZERS

SOLUBLE SULPHUR WITH CALCIUM

Enhances Fruit Quality and Protects from Stress

Soluble Sulphur with Calcium is a clear liquid with 6% Calcium and 10% soluble Sulphur. It shows significant results in Fruits, Vegetables, Cereals, Soybean and Maize with profuse flowering and healthy fruits. It can be used as Liquid Gypsum to improve Calcium and Sulphur deficiencies. It reduces ammonia volatilization from urea.

It is used as a fertilizer address Calcium and Sulphur deficiencies. As a soil amendment, it may be used to improve water infiltration and aid in the leaching of harmful soil salts.

Benefits:

Calcium -

- Works for root development during the early growth stage of the plant.
- Involved in the formation of seeds and grains.
- Essential for the apical growth of plants.
- Needed for the transportation of other minerals within the plant.
- Is a part of the cell wall, and hence related to cell division and the cell elongation process.

Sulphur -

- Assists plants in the formation of proteins, which are essential components of many distinct characteristics.
- Improves the greenish colour and increase the leafiness of crops like spinach.
- Gives garlic and asparagus their distinctive flavours.
- Improves the quality of wheat.
- Provides an adequate supply of sulphur for healthy crop production.
- Aids initial root growth, which is important in rapidly growing crops.
- Promotes seed production and vigorous plant growth.

Resists Rapid Leaching from the Soil | **Improves Water Infiltration** | **Increases Deep Moisture** | **Displaces Harmful Salts**

Reduces Moisture Stress | **Provides a Balance of Nutrients** | **Increases Profit Per Acre** | **Environmental Friendly**

Recommended Crops:

Oilseed Crops, Legumes, Grain Crops, Root Crops, Cucurbits, Cole Crops, Leafy Vegetables, Woody and Herbaceous Ornamentals, Deciduous Fruits, Tropical and Subtropical Fruits, and many other crops.

Dosage and Application Method:

Method	Dosage	Time
Foliar application	1-2 ml/ltr of water	Flowering and fruit setting stage.
Soil application	5 ltr with 400-500 ltr of water per acre	Flowering and fruit setting stage.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

SPECIAL FERTILIZERS

POTASSIUM THIOSULPHATE

Stress-proof crops with Potent Potassium

Potassium Thiosulphate is a clear liquid solution with a neutral to basic pH. It contains 25% potash (potassium) and 17% sulphur, making it an ideal choice for providing essential nutrients to crops. This highly soluble product promotes nutrient uptake, enhances plant health, and can be applied via soil, foliar spray, or irrigation. Improve crop yields and plant vigor with Potassium thiosulphate, a trusted solution for modern agriculture. It's often used in fertigation (drip irrigation) and helps prevent the oxidation of trace elements in the soil, ensuring better nutrient uptake. Additionally, it can lower soil pH in alkaline conditions and increase a plant's resistance to diseases.

Benefits:

- Provides essential sulphur and potassium nutrients to crops
- Compatible with various crops and application methods
- Improves nutrient use efficiency
- Helps reduce chloride toxicity from irrigation water
- Enhances crop yields and overall plant vigor

Recommended Crops, Application Method, and Dosage:

Foliar Application:

Crop(s)	Application Time	Dosage (ltr/acre)
Cotton	At the blooming stage	3.5-4.5
Potato	During tuber initiation stage, tuber development and tuber bulking stage	1.8-3.5
Small Grains	Tillering and early boot stage	1.8-7.5
Canola	Bolting stage (Stem elongation)	1.8-7.5
Alfalfa	At crown green up or on regrowth just after cutting	3.7-7.5
Rice	At panicle initiation stage	3.7-5.6
Peas and Lentils	During late bud to 10% bloom	1.8-3.7
Tomatoes	At fruit set stage	1.8-3.7
Soybeans	Flowering stage	3.7-5.6
Wheat	At tillering to early boot stage	1.8-7.5

Drip Irrigation and Flood or Furrow Irrigation:

Young trees and wine crop	During the growing season, starting at full leaf stage	2.8-4.7
Mature trees and wine crop	During the growing season	4.7-9.4
Vegetables	During the growing season	2.8-4.7
Strawberries	When plants well established	2.8-4.7
Blueberries	10 days after plants are well established	2.8-4.7

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

LIQUID MICRONUTRIENT FERTILIZERS

LIQUID BORON ETHANOLAMINE 10% W/W SC

Prevents Deficiencies for
Sturdy Stems and Healthy Blooms

Boron 10% is a liquid micronutrient fertilizer for crops that have a requirement for additional boron. Boron 10% is water soluble; thus, it is easily assimilated and absorbed by crops via foliar application. Foliar application of boron is useful to enhance vine growth, number of fruits, fruit size, and yield of many cucurbit crops (vegetable crops). Its application stimulates the growth of cambium tissues and apical meristems, promotes the mobility of calcium, and increases the production of pollen and fertilization.

Liquid Boron is a preventive and curative solution to control the insufficiency and deficiency of boron in various crops.

Symptoms: Earliest signs of Boron deficiency show an alteration in the physiology of plants and trees that prevents the absorption of micronutrients (phosphorus, chloride, potassium, etc.) from the soil.

Effects of Boron deficiency in plants and trees can be easily observed with below symptoms:

- Leaves become small, thick and brittle
- Growing points start dying
- Thickening of stems, shortened internodes, reduced flowering, seed setting & seed formation

Benefits:

- Boron is an important micronutrient that is critical for the growth and health of all crops.
- Helps in overcoming the second most widespread micronutrient deficiency problem after zinc.
- Aids in the formation of the cell wall and ensures plant stability, including the movement of energy into plant growing parts.
- Flower and pollen formation is enhanced by the application and plays a role in final seed setting.
- Effective in nitrogen fixation and nodule formation in legume crops.
- Recovers the stunted root growth of plants.

Recommended Crops, Dosage and Application Method:

Foliar Application:

I) 20 days after planting and then
ii) At flower initiation stage

Crops		Dosage (per ltr water)
Vegetable Crops	Beets, Carrots, Cucumbers	1-2 ml
	Broccoli, Cabbage, Cauliflower, Melons	1-3 ml
	Tomatoes, Potatoes, Peas, Lentils, Beans, Peppers	1-2 ml
Field Crops	Sugar Beets, Potato, Carrots	2-4 ml
	Barley, Wheat, Corn, Soybeans, Sunflowers	1-2 ml
Fruit Crops	Apples, Grapes, Pears, Cherries, Peaches, Guava	1-2.5 ml
Horticulture Field		1-2 ml

Drip Irrigation: 250-300 ml in 1 Acre

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

LIQUID MICRONUTRIENT FERTILIZERS

LIQUID CALCIUM 11% W/W SC

Builds Strong Cell Walls

Liquid Calcium 11% SC is a highly concentrated micronutrient liquid that allows a higher calcium input to be available to the plant. It is typically applied during the flowering stage to support proper pollination and fruit set, leading to improved fruit yield. The application of this micronutrient liquid makes the cell wall strong, which increases plant resistance to pests and diseases. The product is specially formulated to provide maximum crop safety.

Benefits:

- Plays an extremely important role in the development of plant tissues and helps plants to grow better.
- Helps in the better growth and development of the plant cell wall.
- Crucial to activate certain enzymes and to send signals that coordinate certain cellular activities in the plants.
- Makes calcium available to the plant for healthy root development and builds immunity inside the plant against attacking pests and pathogens.
- Aids in maintaining membrane stability, indirectly supporting nutrient uptake and internal nutrient transport.

Dosage and Recommended Crops:

Crops	Timing	Dosage (per ltr of water)
Broccoli	4-6 application starting shortly before head formation	3.5-5 ml
Brussels Sprouts	Multiple applications	4-8.5 ml
Cabbage, Cauliflower, Lettuce, Endive	4-6 applications starting immediately prior to head formation	3.5-5 ml
Carrot	Prior to strawing	3 ml
Celery, Chicory	Weekly applications starting before blackheart symptoms arise	3.5-4 ml
Potato	Multiple applications from the early hook stage	2.5-5 ml

Application Method:

Foliar Application:
I) 20 days after planting, and then ii) At the flower initiation stage

Drip Irrigation Application:
250-300 ml in 1 Acre
The irrigation tank should be filled with half of the required amount of water. Measure the required amount of Calcium 11% and stir properly and then add the remaining water to form a uniform mixture.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

LIQUID MICRONUTRIENT FERTILIZERS

ZINC OXIDE
39.5% W/W SC

Corrects Deficiency and unlocks crop Productivity

Zinc Oxide 39.5% SC is a liquid micronutrient fertilizer primarily used to correct and prevent zinc deficiency in various crops. It's applied as a foliar spray and helps plants with chlorophyll synthesis, enzyme function, and auxin production, leading to improved growth and yield.

Benefits:

- Requires a low dosage.
- Nanoparticles support rapid absorption.
- Compatible with most agrochemicals for tank mixing.
- Supports nitrogen metabolism and aids in the biosynthesis of proteins and starch.
- Plays a role in chlorophyll formation and activates several key enzymes.

Recommended Crops and Dosage:

Cereals	Citrus	Cotton
Cereals: 1.0-1.5 ml/ltr water at 30-35 days after sowing and repeat at 40-45 days after sowing. Water rate: 160-200 ltr per acre.	Citrus: Spray 1 - 1.5 ml/ltr water firstly after bahaar treatment stage and secondly at fruit setting stage. Water rate: 200-400 ltr per acre.	Cotton: 0.3 to 1 ltr/ha 3 to 4 weeks after emergence. Repeat as required with 10 to 14 days between treatments. Water rate: 20-60 ltr per acre.

Maize	Potato	Rice
Maize: 1.0-1.5 ml per ltr water at 30-35 days after sowing. Water rate: 160-200 ltr per acre.	Potatoes: Spray 1 to 1.5 ml/ltr water 30-35 days after planting. Water rate: 160-200 ltr/ha.	Rice: 1.0 - 1.5 ml/ltr water at 30-35 DAT and repeat at 45-50 DAT. Water rate: 160-200 ltr per acre.

Sugarcane	Wheat	Apple
Sugar Cane: Spray 1-1.5 ml/ltr water firstly 45 days after planting stage and secondly 90 days after planting stage. Water rate: 150-200 ltr/acre.	Wheat: Spray 1-1.5 ml/ltr water firstly 30-35 days after sowing and secondly 45-50 days after sowing. Water rate: 150-200 ltr/acre.	Apple: First application at petal fall stage @ 1 ml/ltr water (Foliar). Second application post harvest @ 1 ml/ltr water (Foliar). Maximum water rate: 800 ltr/acre.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

LIQUID MICRONUTRIENT FERTILIZERS

ZINC GLYCINATE

The Organic Solution for
Healthy and Strong Plants

Zinc Glycinate is a zinc chelate formed with glycine specifically used for foliar application. The advantage of using glycine minerals is that the glycine surrounds and protects the minerals from antagonistic interactions. These interactions can take place in a solution, in the soil, or on the surface of the leaf. It's particularly useful for correcting zinc deficiencies, boosting flowering and fruit development, and promoting overall plant vigor.

Benefits:

- Enhances key metabolic activities, including protein synthesis and enzyme function.
- Helps in the early establishment of seedlings.
- Better bud formation in fruit crops and tillering in cereals.

Standard Specification:

Parameters	Specifications
Zinc (as Zn) % w/w	Min. 6.80%
pH (1% distilled water)	4.0-5.5
Specific Gravity gm/ml	1.21-1.28

Recommended Crops:

Apple, Banana, Brinjal, Cabbage, Citrus, Cucurbits, Grapes, Maize, Mango, Pomegranate, Rice, Tobacco, Tomato, Wheat, Other Field Crops, Cash Crops, Spices & Condiments.

Dosage and Application Method:

Field Crops	Fruit Crops	Vegetable Crops	Dosage	Application Method
1st Spray: 20-30 days after transplanting/sowing	1st Spray: Active growth stage	1st Spray: 25-30 days after transplanting/sowing	1.5-2.0 ml/ltr of water 200-400 ml/acre	Spray only
2nd Spray: 40-45 days after transplanting/sowing	2nd Spray: Flowering stage	2nd Spray: 25-30 days after 1st application		

Compatibility: Do not mix with lime, copper, sulphur or mineral oil based products

Phytotoxicity: It has not been reported when used as recommended

Note: We recommend 200 ltr of water per acre. In long duration crops, user need to go for > 2 sprays at an interval of 20 days, depending on the need.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

LIQUID MICRONUTRIENT FERTILIZERS

CALCIUM GLYCINATE

The Organic solution, designed to Boost Plant Health

Calcium Glycinate is a chelated liquid formulation that contains 6.0% calcium. It is used as a foliar or soil treatment in crops where calcium deficiency is diagnosed or suspected. It provides a readily available form of calcium that supports the formation and stability of cell walls, improving plant structure and resistance to stress. Calcium also plays a key role in activating enzyme systems involved in nutrient uptake and nitrogen metabolism, contributing to overall plant vigor, root development, and balanced growth.

Benefits:

- Supports root and shoot development during early growth stages.
- Enhances cell wall strength for healthier, more resilient plant tissue.
- Aids nutrient transport and overall plant metabolic activity.
- Contributes to improved forage quality by increasing calcium content.
- Helps optimize growth conditions that support yield potential.

Standard Specification:

Parameters	Specifications
Calcium (as Ca) % w/w	Min. 6.0%
pH (1% distilled water)	5.5-7.0
Specific Gravity gm/ml	1.15-1.22

Recommended Crops:

Apple, Peanuts, Almonds, Banana, Brinjal, Cabbage, Chilli, Citrus, Cotton, Grapes, Mango, Pomegranate, Tomato, Plantation, Litchi, and Other Crops.

Dosage and Application Method:

Dosage	Method	Time
2-3 ml/ltr of water	Spray only	First spray at flowering stage
		Second spray at fruit development stage

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved

LIQUID MICRONUTRIENT FERTILIZERS

BORON GLYCINATE

The Organic Solution for balanced Boron nutrition

Boron plays a vital role in pollen tube growth, seed set, and overall reproductive success in crops. It regulates the transport of sugars and carbohydrates, supports cell wall stability, and contributes to membrane function. This glycine-chelated boron formulation is designed for efficient foliar absorption, helping correct deficiencies and support crop productivity.

Benefits:

- Increases the yield of the produce.
- Helps in new cell formation and root development.
- Increases the number of flowers and fruits.
- It is a completely water-soluble, efficient boron fertilizer.
- Ensures the growth and high yield of all crops.
- Keeps plants green and healthy.
- It is a micronutrient fertilizer for foliar spray.
- Better flower retention.
- Better fruit setting.

Standard Specification:

Parameters	Specifications
Boron (as B) % w/w	Min. 5.0%
pH (1% distilled water)	8.0-9.0
Specific Gravity gm/ml	1.10-1.23

Recommended Crops:

Apple, Banana, Brinjal, Cabbage, Chilli, Citrus, Cotton, Grapes, Mango, Pomegranate, Tomato, Plantation, Litchi, Other Crops.

Dosage and Application Method:

Dosage	Method	Time
2 ml/ltr of water	Spray only	First spray at flowering stage
		Second spray at fruit development stage

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

FCO Approved **LIQUID MICRONUTRIENT FERTILIZERS**

MANGANESE CARBONATE 26% W/W SC

Micronutrient that makes a Macro Impact

Manganese Carbonate 26% SC is a liquid formulation designed to correct manganese deficiency and boost plant vigor. It plays a critical role in chlorophyll synthesis, photosynthesis, and enzymatic activation. Its application supports lignin formation, contributing to stronger cell walls and improved tolerance to biotic and abiotic stress. Suitable for a wide range of crops, it promotes better flowering, fruit setting, and ultimately, higher yields with improved quality.

Benefits:

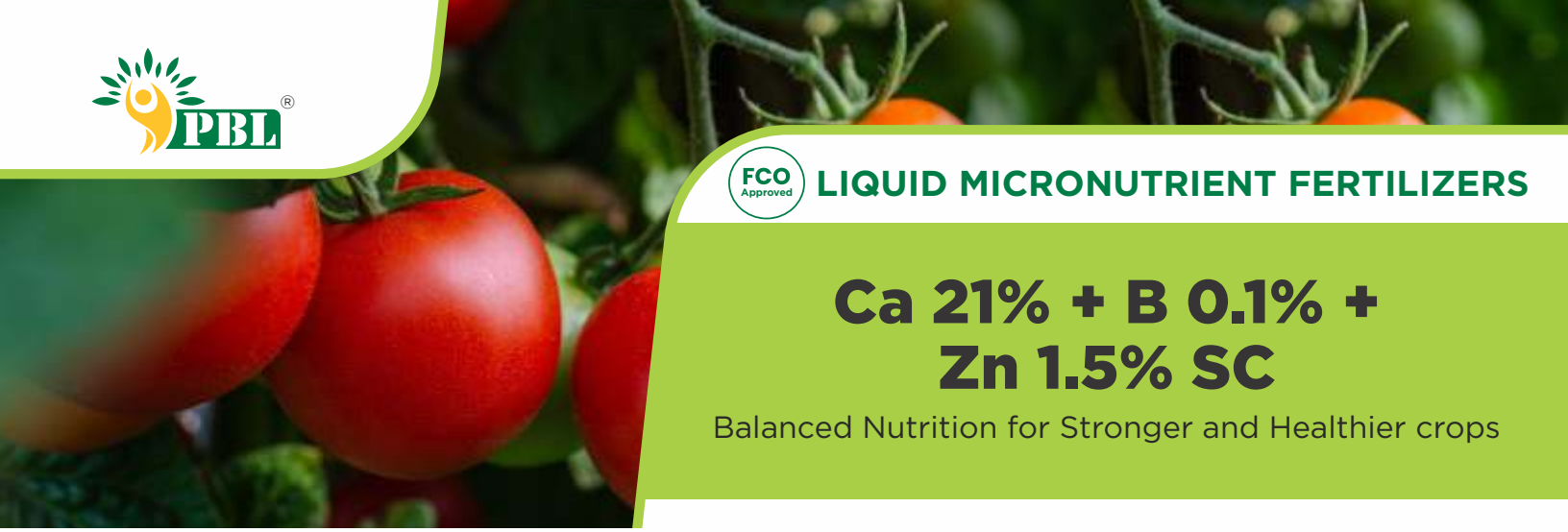
- Supports enzymatic processes involved in amino acid synthesis, essential for plant growth.
- Promotes root elongation for stronger anchorage and better nutrient access.
- Contributes to structural defenses in roots by supporting lignin formation.
- Enhances chlorophyll formation, improving photosynthesis and energy production.
- Increases iron absorption and utilization within the plant.
- Involved in auxin synthesis and supports key metabolic functions.

Dosage and Recommended Crops:

Crops	Application stage	Dosage (ml/acre)
Alfalfa / Lucerne	At vegetative stage & flower bud formation	400
Almond	At new leaf growth, bud burst	400
Apple	Pre-flowering, petal fall, post-harvest	400-600
Apricot	At fruit development, repeat every 10 days	400
Bean, Chickpea, Peas, Lupin	4–6 leaf stage & repeat every 15 days if required	400
Brassica & Leafy Vegetables	4–6 leaf stage & 15 days interval spray	400
Carrot, Garlic, Groundnut, Onion	When plants are 15 cm tall, repeat every 15 days	400
Cereals	During grain development	400-800
Citrus	Pre-flowering to 2nd flower stage	400-800
Cotton	Spring/autumn flushes, pre- & post-flowering	500-600
Grapes	At 30 days after emergence, repeat every 15 days	400
Kiwi	At pre-flowering, fruit set, petal fall, and fruit development	400
Maize / Sweet Corn	At bud development and fruiting	400-800
Mango	New leaf stage and bud burst	400-800
Olive	At bud burst and flowering	400-800
Pomegranate	At bud emergence, flowering, fruit development	400
Potato	At 2–6 leaf stage	400
Strawberry	At green bud stage	400

Dilution in water will depend on the crop canopy. For general it is 200 ltr/acre
Final spray should be done at least one month before harvest.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.



FCO Approved

LIQUID MICRONUTRIENT FERTILIZERS

Ca 21% + B 0.1% + Zn 1.5% SC

Balanced Nutrition for Stronger and Healthier crops

It is a revolutionary flowable suspension concentrate, enriched with Calcium, Zinc, and Boron. Its fine particle size and stable suspension ensure efficient nutrient availability and uptake. Designed to support critical growth stages, it contributes to improved root development, stronger cell walls, and better flowering and fruit set across crops.

Benefits:

- Its concentrated formula allows lower application rates compared to conventional Calcium products, making it more efficient and economical.
- It promotes cell division and elongation, leading to stronger and healthier plants.
- This Calcium-rich solution strengthens cell walls, improving structural integrity and tolerance to environmental stress.
- It helps stimulate plants' natural defence mechanisms, making them more resilient to abiotic stresses like drought and temperature.
- It facilitates the translocation of carbohydrates and nutrients within the plant, ensuring optimal growth and development.
- It improves fruit skin thickness, reduces transportation losses, and enhances the shelf life and marketability of produce.
- By addressing key growth factors, it has the potential to significantly improve overall crop yield and quality.

Dosage and Recommended Crops:

Crops	Application stage	Dosage (ltr/acre)
Potato	After a week of emergence	400 ml
Tomato & Chilli	Fruit set stage (45-55 DAT) repeat applications at intervals of 15-20 days	400 ml
Apple, Citrus & Pomegranate	Fruit set stage fruit development stage	400-600 ml
Grapes	4 mm berry size 8 mm berry size 10 days before harvest	400-600 ml
Banana	At the bunch set stage At the bunch development stage 15 days before harvest	400-600 ml
Tea / Coffee	Before new flush of leaf (tea)/flowering in Coffee flowering, 8-10 days before harvest	400-600 ml
Other crops (Cereals, Pulses, Oilseeds, other Fruit & Vegetables etc)	Fruit/pod/grain setting stage Fruit/pod/grain development stage	400-600 ml

Compatibility:

It is compatible with a wide range of agrochemicals.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

BIO-FUNGICIDES

TRICHODERMA VIRIDE 1.5% WP / 1.5% L

Shields crops from Soilborne diseases

CFU Count:
WP Formulation: Minimum 2 x 10^6 CFU/g
Liquid Formulation: Minimum 2 x 10^6 CFU/ml

Trichoderma viride is a fungal biocontrol agent serving as an antagonistic fungus that can suppress more than 60 species of pathogen-causing diseases such as, root rot, wilts, brown rot, damping off, charcoal rot, and other soil-borne infections. In addition to disease control, it also acts as a plant growth promoter.

Benefits:

- Eco-friendly Bio-fungicide that does not harm the environment, beneficial organisms, or pollinators, and supports soil microecology.
- Protects high value nursery seedlings and field crops from a wide range of soil-borne and seed-borne pathogens through mycoparasitism and antibiosis.
- Induces systemic resistance in plants, enhancing their natural defense mechanisms.
- Boosts plant vigour, enhances drought and disease resistance.
- Helps in decomposing farm waste, solubilizing phosphorus, detoxifying contaminated soils, and improving overall soil health.
- Suitable for organic farming, natural farming, and biofertilizer-based practices.

Recommended Crops:

Paddy, Maize, Rice, Pulses, Vegetables, Oilseeds, Cotton, Sugarcane, Ginger, Turmeric, Cardamom, Black Pepper, Tea, Coffee, Fruits, and Cut Flowers.

Target Pathogens:

Pythium spp., Phytophthora spp., Rhizoctonia spp., Colletotrichum spp., Fusarium spp., Sclerotium rolfsii, Sclerotinia spp., Macrophomina, and *Cephalosporium spp.*

Dosage and Application Method:

Method	*T. viride* 1.5% WP	*T. viride* 1.5% Liquid
Seed Treatment	10-20 gm/Kg of seeds	5-10 ml/Kg of seeds
Nursery Bed Treatment	50 gm/sq.m.	20 ml/sq.m.
Seedling Root Treatment	10-20 gm/ltr of water	5 ml/ltr of water
Soil Application	1-2 Kg/acre	1-1.5 ltr/acre
Foliar Spray	5-10 gm/ltr of water	5 ml/ltr of water

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

BIO-FUNGICIDES

TRICHODERMA HARZIANUM 1.0% WP / 2.0% AS

Start strong with enhanced Seed Health

CFU Count:
WP Formulation: Minimum 2 x 10^6 CFU/g
Liquid Formulation: Minimum 2 x 10^6 CFU/ml min.

Trichoderma harzianum is a fast colonizing, highly adaptable fungal bioagent used to control a broad range of plant pathogens. It acts both as a natural fungicide and a root-associated growth promoter, making it a dual purpose tool for sustainable farming.

Benefits:

- Controls root rot, wilt, damping off, and other fungal diseases
- Stimulates root branching and plant vigor due to PGPR traits
- Improves tolerance to drought and abiotic stress
- Detoxifies contaminated soils and supports nutrient cycling
- Compatible with organic inputs and certified for sustainable farming
- Works well in consortium with other beneficial microbes

Recommended Crops:

Paddy, Maize, Rice, Pulses, Vegetable Crops, Oil Seeds, Cotton, Sugarcane, Ginger, Turmeric, Cardamom, Black Pepper, Tea, Coffee, Fruits, and Cut flower crops, etc.

Target Pathogens:

Highly effective in controlling *Pythium spp., Phytophthora spp., Colletotrichum spp., Rhizoctonia spp., Fusarium spp., Sclerotium rolfsii, Sclerotinia spp., Macrophomina, Cephalosporium spp.,* and *Meloidogyne spp.* (Root Knot Nematodes).

Dosage and Application Method:

Method	*T. harzianum* 1.0% WP	*T. harzianum* 2.0% AS
Seed Treatment	10-20 gm/Kg of seeds	10-20 ml/Kg of seeds
Nursery Bed Treatment	50 gm/sq.m.	20 ml/sq.m.
Seedling Root Treatment	20 gm/ltr of water	20-30 ml/ltr of water
Soil Application	2 Kg/acre	1 ltr/acre
Foliar Spray	5-10 gm/ltr of water	5 ml/ltr of water

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

BIO-FUNGICIDES

PSEUDOMONAS FLUORESCENS 1.0% WP

Promotes a thriving Rhizosphere
for Healthier Plants

CFU Count: Minimum 1 x 10^8 CFU/gm

Pseudomonas fluorescens 1.0% WP is a bioformulated product based on a fluorescent strain of Pseudomonas, categorized under Plant Growth Promoting Rhizobacteria (PGPR). It is designed to enhance plant growth, trigger systemic resistance, and suppress soil-borne pathogens effectively. efficacy of Pseudomonas antagonists in controlling fungal diseases is often better when used alone and sometimes in combination with compatible fungicides. *P. fluorescens* is a potential Bio-Pesticide for augmentative biological control of many diseases of agriculture and horticultural importance.

Benefits:

- Protect crops from several soil-borne and seed-borne plant pathogens.
- Nature-friendly and active against specific plant pathogens and pathogenic nematodes present in soil.
- Induces resistance in plants against pathogens and is helpful in export-oriented produce by serving as an alternative to chemical fungicides.
- Pseudomonas promotes plant growth by suppressing pathogenic microorganisms, synthesizing growth-stimulating plant hormones, PGR activity, and promoting increased plant disease resistance.
- It also protects plants during different stress conditions like heavy metal toxicity, osmotic stress, temperature extremes, and oxidative damage.
- It is frequently used as an important component of integrated pest management and a key component for managing organically grown fields as well as greenhouse crops.

Recommeded Crops:

Vegetable Crops, Groundnut, Soybean, Cotton, Paddy, Maize, Rice, Pulses, Sugarcane, Ornamental Crops, Tea, Turmeric, Cardamom, Black Pepper, and Fruit Crops.

Target Pathogens:

Highly effective against various foliar diseases as well as soil-borne diseases such as *Fusarium spp., Verticillium spp., Phytophthora spp., Pythium spp., Rhizoctonia spp., Botrytis spp., Sclerotium spp., Sclerotinia spp., Xanthomonas spp.*, etc.

Dosage and Application Method:

Method	Dosage
Seed Treatment	10 gm/Kg of seeds
Nursery Bed Treatment	5-8 gm/ltr of water for soil drenching
Seedling Root Treatment	10 gm/ltr
Soil Augmentation/Treatment	1-1.5 Kg/100 Kg of FYM, compost, manure for broadcast in one acre
Foliar Application	4 gm/ltr

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We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

BIO-FUNGICIDES

BACILLUS SUBTILIS 1.5% AS

Controls pathogens with a Natural Protector

CFU count: Minimum 1×10^8 CFU/ml

Bacillus subtilis 1.5% AS is a Bio-Fungicide and plant growth-promoting rhizobacteria (PGPR), which colonizes roots and protects the root system of the plant. It inhibits the germination of fungal spores, prevents pathogen attachment to plant surfaces, and suppresses harmful microbes through competitive exclusion. This makes it effective against a range of soil borne, foliar, and fruit fungal diseases. It also solubilizes phosphorus and produces siderophores—iron-chelating compounds that enhance plant nutrition and suppress pathogen growth. In addition, B. subtilis supports plants by enhancing secondary metabolite production, modulating phytohormone levels, and improving tolerance to environmental stresses.

Benefits:

- Competitive effects of *Bacillus subtilis* allow it to multiply and colonize massively and rapidly, which helps in achieving antibacterial and disease-preventing effects.
- *Bacillus subtilis* not only directly suppresses plant pathogenic bacteria but also boosts the plant's own defense mechanisms through induced systemic resistance.
- It produces antibacterial compounds such as subtilin, organic acids, and antimicrobial peptides that inhibit pathogen growth, disrupt bacterial cell membranes, and suppress their reproduction.
- It promotes seed germination and plant development by increasing photosynthetic pigment synthesis and modulating cytokinin and ethylene balance.
- Enhances stress tolerance and disease resistance in its plant hosts by triggering the expression of stress-responsive genes, phytohormones, and protective metabolites.
- It is widely used in integrated pest management and plays a vital role in organic and greenhouse crop production.

Recommended Crops:

Grapes, Berries, Orchid, Strawberry, Banana, Capsicum, Groundnut, Cucumbers, Soybean, Roses, and other Cut flowers.

Target Pathogens:

Pythium spp., Fusarium app., Alternaria spp., Erysiphe spp., Xanthomonas spp., Botrytis spp., Phytophthora spp., Sclerotinia spp.

Dosage and Application Method:

Method	Dosage
Foliar spray	2 ml/ltr
Soil drenching	500 ml

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We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

BIO-PESTICIDES

BEAUVERIA BASSIANA 1.15% WP

Promotes Natural Pest control for Healthier Plants

CFU: Minimum 1×10^8 CFU/gm

Beauveria bassiana 1.15% WP is a biological insecticide containing spores of Beauveria bassiana, a fungus that infects and kills insect pests through contact. Once applied, the spores germinate on the insect's body, penetrate the cuticle, and release toxins that lead to death and this is typically seen as white muscardine disease. It is effective against a wide range of pests and works best under warm, humid conditions.

Benefits:

- Entomopathogenic fungal spores do not need to be ingested; contact with the insect's body is sufficient to initiate infection and cause death.
- It effectively controls many economically important crop pests, improves plant health, and contributes to higher productivity.
- Its formulations are compatible with agrochemicals and other natural enemies and pollinators.
- It can be applied up to the day of harvest, as it leaves no harmful residues for consumers.
- It plays a key role in integrated pest management and is widely used in organic farming and greenhouse crop systems.

Recommended Crops:

Rice, Cereals, Pulses, Cotton, Oil seeds, Cabbage, Cauliflower, Fruits, and Plantation crops, especially coffee.

Target Pests:

It is an entomopathogenic fungus that causes white muscardine disease in a range of lepidopteran insects, as well as whiteflies, aphids, thrips, grasshoppers, and certain types of beetles.

Methods of Application and Dosage:

Method	Dosage
Soil application	2 Kg/50 Kg of FYM, compost, manure and broadcast in one acre
Foliar spray	3-5 gm/ltr

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

BIO-PESTICIDES

BACILLUS THURINGIENSIS Var. KURSTAKI 0.5% WP / 10% WSL

Next-generation biological Insecticide

Bacillus thuringiensis var. Kurstaki is a next-generation biological insecticide designed for precision pest control in modern agriculture. Formulated with Bacillus thuringiensis var. Kurstaki is effective against lepidopterans. It provides an eco-friendly, residue-free solution that effectively protects vital crops such as pulses, vegetables, cereals, and oilseeds without harming beneficials or the environment. Ideal for integrated pest management (IPM) programs, Btk offers farmers a safe, efficient, and sustainable alternative to chemical insecticides

Specifications	Btk 0.5% WP	Btk 10% WSL
Minimum CFU	1 X 10^{11} CFU/gm	2x10^{9} CFU/ml
Minimum Potency	13329 IU/gm	14245 IU/ml

Benefits:

- Delivers up to 100% pest mortality, ensuring effective control of Lepidopteran pests in favourable crop niche
- Ready-to-use liquid formulation makes it convenient and time-saving for farmers
- Safe to handle with low risk of inhalation or skin irritation during application
- Disperses well in water, providing uniform coverage on plant surfaces
- Compatible with standard spraying equipment, no special tools required

Recommended Crops:

Pulses, Chickpea, Pigeon pea, Maize, Sorghum, Pearl Millet, Sugarcane, Paddy, Cabbage, Cauliflower, Broccoli, other Crucifers, Brinjal, Groundnut, Soybean, Castor, Pigeon pea, etc.

Target Pests:

Highly effective against Legume Pod Borer *(Helicoverpa armigera, Maruca spp Spodoptera litura)*, Diamondback Moth *(Plutella xylostella)*, Stem Borer *(Chilo partellus),* Borer *(Sesamia inferens)*, Brinjal Fruit & Shoot Borer *(Leucinodes orbonalis)*, Rice Leaf Folder *(Cnaphalocrocis medinalis)*, Red Hairy Caterpillar *(Amsacta albistriga)*, Tomato leaf miner *(Tuta absoluta)*.

Dosage and Application Method:

Formulation	Dosage	Time
Btk 10% WSL	10 to 20 ml/ltr	Foliar spray at Pre-flowering, Post-flowering, and Pod emergence stage. It is recommended to do 2–3 sprays/crop cycles.
Btk 0.5% WP	5-10 gm/ltr	

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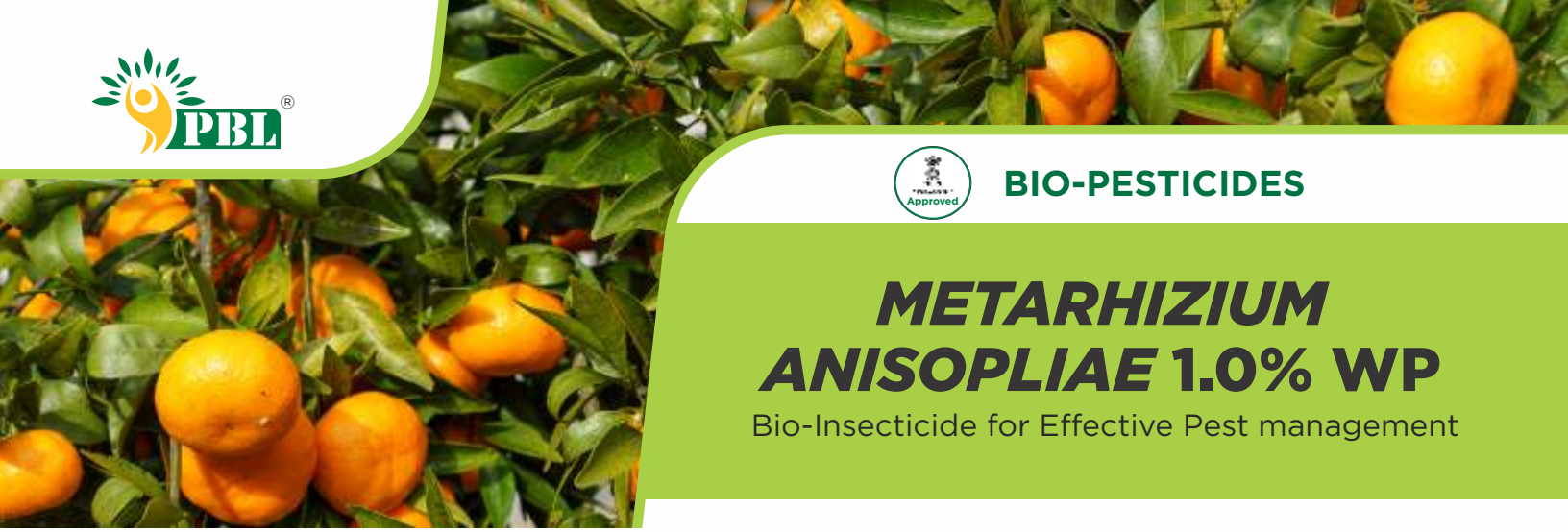

BIO-PESTICIDES

METARHIZIUM ANISOPLIAE 1.0% WP

Bio-Insecticide for Effective Pest management

CFU: Minimum 1 x 10^8 CFU/gm

Metarhizium anisopliae 1.0% WP is a biological Insecticide based on an entomopathogenic fungi that naturally infect and kill a wide range of insect pests by penetrating their cuticle. It is especially effective against soil and foliar pests like weevils, white grubs, hoppers, and caterpillars. This product offers targeted pest control without harming beneficial organisms, making it ideal for sustainable farming.

Benefits:

- Effectively targets key insect pests that impact crop yield and quality.
- Eco-friendly solution that supports ecological balance, making it ideal for sustainable farming.
- Reduces pest pressure, leading to healthier plants and improved yields.
- Safe for beneficial insects and natural predators; does not disrupt the agro-ecosystem.
- Highly effective against thrips across diverse cropping systems; can be applied close to harvest due to low residue risk.

Recommended Crops:

Suitable for a wide range of crops including:

- Fruits: Mango, Banana, Citrus, Grapes, Pomegranate, etc.
- Field Crops: Sugarcane, Cotton, Maize, Sorghum, Barley, Rice, Groundnut, Soybean, Potato.
- Vegetables: Cole crops, Tomato, Chilli, Brinjal, Onion, Garlic, etc.
- Nurseries & Ornamentals

Target Insects:

Root weevils, Black vine weevil, Spittlebug, White grubs, Termites, Japanese beetle, Caterpillar, Semi-loopers, Beetle grubs, Borers, Cutworms, Sucking pests like Pyrilla, Mealybugs, Aphids.

Dosage and Application Method:

Methods	Dosage	Instructions
Foliar spray	1-1.5 kg/200 ltr water/acre	Spray evenly over the target area. Ensure good leaf surface coverage. Repeat as needed based on pest infestation.
Soil Application	2 Kg/150 Kg of well-decomposed FYM/compost	Moisten, cover with plastic, and ferment for 4 days. Apply evenly in 1 ha field after 8–10 days of incubation.
Soil Drenching	10 gm/ltr water	Drench around the root zone for soil-borne pest control.

Note: Spraying should be done during cooler parts of the day for maximum effectiveness. Avoid mixing with chemical fungicides or toxic pesticides.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

BIO-PESTICIDES

VERTICILLIUM LECANII 1.15% WP

Controls pests and Defends every part of the crop

CFU: Minimum 1 × 10^8 CFU/gm

Verticillium lecanii 1.15% WP is a biological Insecticide containing the entomopathogenic fungus *Lecanicillium lecanii*. It is highly effective against soft-bodied pests like aphids, whiteflies, mealybugs, and scales in agricultural and horticultural settings. This product is designed to provide a safe and eco-friendly solution to pest management, reducing reliance on synthetic chemical pesticides while promoting sustainable agricultural practices.

Benefits:

- Based on a naturally occurring fungus, it offers safe pest control without harming the environment.
- Controls soft-bodied pests such as mealy bugs, aphids, and whiteflies that damage crop health and yield.
- Non-toxic to beneficial insects like bees and ladybugs, and safe for people handling or working in treated areas.
- Helps farmers reduce the use of harsh chemical pesticides, supporting residue-free crop production.
- Compatible with eco-friendly farming practices and integrated pest management programs.
- Easy to apply with standard foliar spray equipment, saving time and effort in the field.

Recommended Crops:

Banana, Grapes, Guava, Citrus, Mango, Sapota, Apple, Coconut, Paddy, Cotton, Tomato, Chilly, Citrus, Brinjal, Onion, Okra, Tea, Cardamom, Coffee, Aromatic and Medicinal crops

Dosage and Application Method:

Method	Target Pests	Dosage	Dilution in Water
Foliar spray	Waxy skin insects & Sucking pests	1 Kg/acre	200 ltr/acre

Instructions:

- Apply during early morning or late evening.
- Repeat application at 10–15 day intervals during infestation.
- Do not mix with chemical fungicides.
- Maintain field humidity after application for better spore germination.

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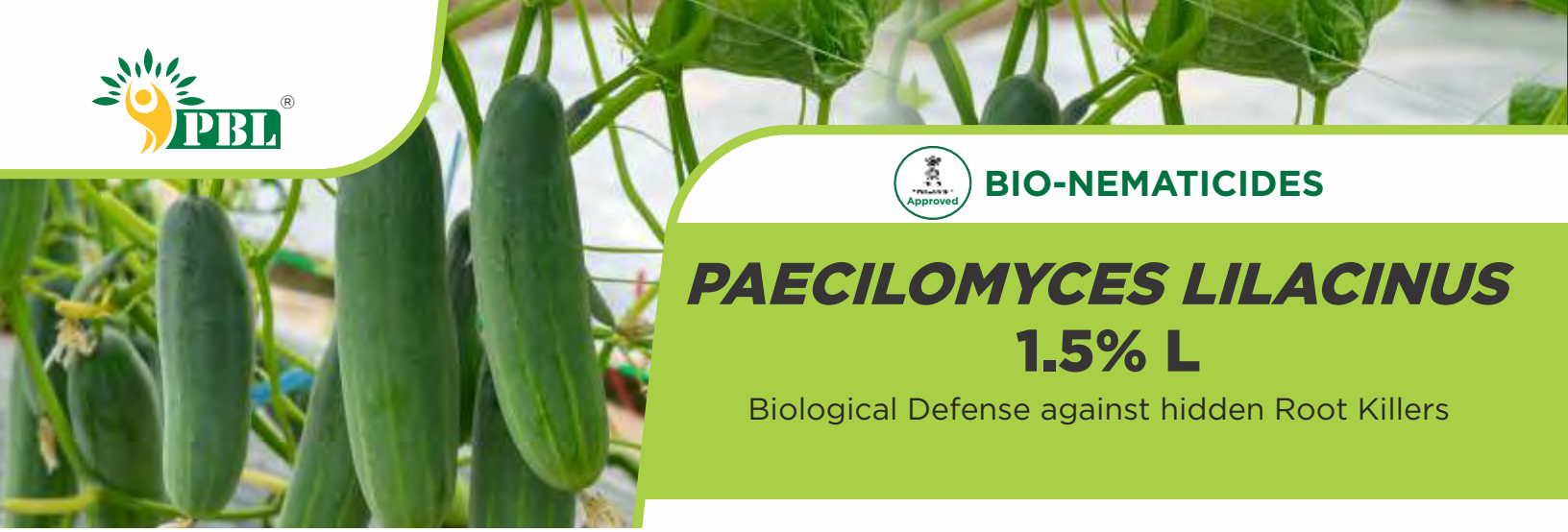

BIO-NEMATICIDES

PAECILOMYCES LILACINUS 1.5% L

Biological Defense against hidden Root Killers

CFU: Minimum 2 × 10^8 CFU/ml

Paecilomyces lilacinus 1.5% ltr is a biological Nematicide formulated using a naturally occurring soil fungus known for its effectiveness against a wide variety of plant-parasitic nematodes. It infects eggs, juveniles, and adult stages of nematodes, offering broad-spectrum protection in an eco-friendly and sustainable way.

Benefits:

- Controls root knot, burrowing, lesion, cyst, and other harmful nematodes that affect crop roots.
- Being a naturally occurring fungus, it is safe for beneficial soil microbes and poses no harm to crops, or the environment.
- Applied directly to soil, it attacks nematodes at multiple life stages, breaking the lifecycle and reducing crop damage.
- Promotes healthy root development and boosts plant vigor.
- Supports sustainable, residue-free farming practices.

Recommended Crops:

Maize, Sorghum, Soybean, Chickpea, Cowpea, Eggplant, Potato, Capsicum, Tomato, Cucumber, Ornamental flowers, Vineyards, and Nursery crops.

Target Nematodes:

- Root-knot nematodes: *Meloidogyne spp.*
- Cyst nematodes: *Heterodera spp., Globodera spp.*
- Root lesion nematodes: *Pratylenchus spp.*
- Reniform nematodes: *Rotylenchulus reniformis*

Dosage and Application Method:

Method	Dosage	Instructions
Seed treatment	5-10 ml/Kg of seeds	Mix well with *Paecilomyces lilacinus*, shade dry, and sow.
Soil application	2.4 ltr/50 Kg FYM/compost for an acre	Mix and apply uniformly around the rhizosphere. Repeat 40 days after planting if needed.
Drip irrigation	2.4 ltr in 200 ltr of water	Filter and apply through drip lines post-planting. Repeat for high nematode pressure areas.
Soil drenching	10 ml/ltr of water	Apply directly around the root zone as a soil drench.

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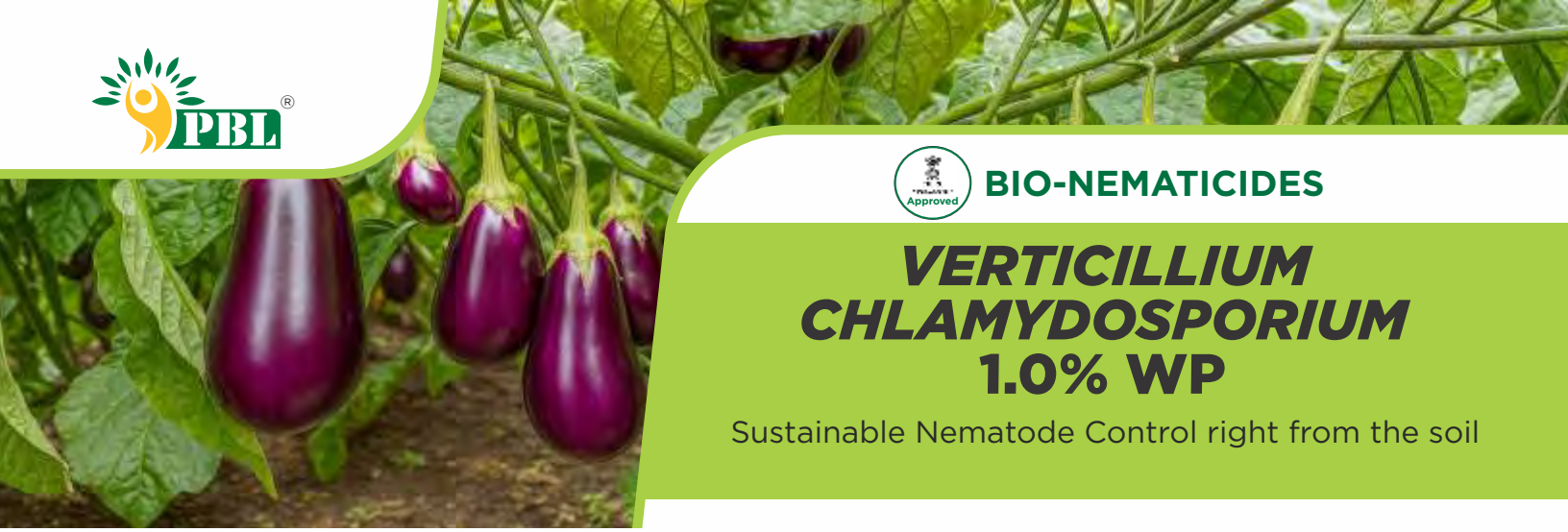

BIO-NEMATICIDES

VERTICILLIUM CHLAMYDOSPORIUM 1.0% WP

Sustainable Nematode Control right from the soil

CFU: Minimum 2×10^6 CFU/gm

Verticillium chlamydosporium is a naturally occurring, eco-friendly Bio-Nematicide designed to protect crops from harmful nematodes. This product contains beneficial microorganisms that target and suppress root-knot, cyst, and lesion nematode populations in the soil while preserving beneficial insects in the environment. It's an ideal addition to Integrated Pest Management (IPM) systems and supports sustainable agriculture.

Benefits:

- Offers natural and eco-friendly nematode control for healthier crop growth.
- Effectively targets soil-borne nematodes, minimizing root damage and nutrient loss.
- Safe for beneficial insects, pollinators, and the environment.
- Convenient wettable powder form for easy application via soil or seed treatment.
- Supports ecological balance and sustainable farming practices.

Recommended Crops, Pests & Dosage:

Crop(s)	Target Pest(s)	Dosage & Application Method
Tomato, Brinjal, Okra, Carrot, and Vegetables	Root-knot nematodes (*Meloidogyne spp.*), Cyst nematodes (*Heterodera, Globodera spp.*), Root lesion nematodes (*Pratylenchus spp.*)	Seed treatment: 20 gm/Kg seed Soil application: 2 Kg/acre Nursery beds: 50 gm/sq.m.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

PLANT GROWTH REGULATORS

PACLOBUTRAZOL

23% SC & 40% SC

Regulates Plant Growth for Optimal Yields

The growth hormones in plants regulate and influence various developmental processes. Certain Plant Growth Regulators (PGRs) act antagonistically to the hormones that stimulate shoot elongation. These growth retardants reduce shoot length and channel more nutrients toward fruit and seed production.

Paclobutrazol is one of the most extensively used Plant Growth Regulators, especially in Mango cultivation. Its primary role is to inhibit gibberellin synthesis, which promotes vegetative growth. By suppressing gibberellin, Paclobutrazol promotes flowering and fruiting. As a result, the plant's energy is redirected from vegetative growth to reproductive development, significantly improving yield potential.

Benefits:

- Regulates excessive vegetative growth.
- Enhances flowering, resulting in increased yield.
- Promotes early flowering and uniform fruit maturity.
- Improves overall fruit size, color, and quality.

Recommended Dosage:

Crop	Paclobutrazol 23% SC		Paclobutrazole 40% SC	
	Age of Plant	Dosage	Crop	Dosage
Mango tree	Age 7-15 years	15 ml	Pigeon Pea	30 ml
	Age 16-25 years	20 ml		
	Age more than 25 years	25-40 ml		

Application Time:

Ideally, Paclobutrazol should be applied after the harvest of fruits.

Method:

For Mango:
Paclobutrazol is more effective when applied using the collar drench method. Mix the recommended dose with 0.5 to 2 ltr of water per tree and apply it around the base of the trunk, focusing on the trunk crack line.

Alternatively, for soil drench application, dilute the recommended quantity in 10 ltr of clean water and apply it in a 5 cm deep furrow, 2 to 3 feet away from the trunk. Cover the furrow with soil after application.

For Pigeon Pea:
Apply Paclobutrazol as a foliar spray at the flowering initiation stage, preferably after sunset.

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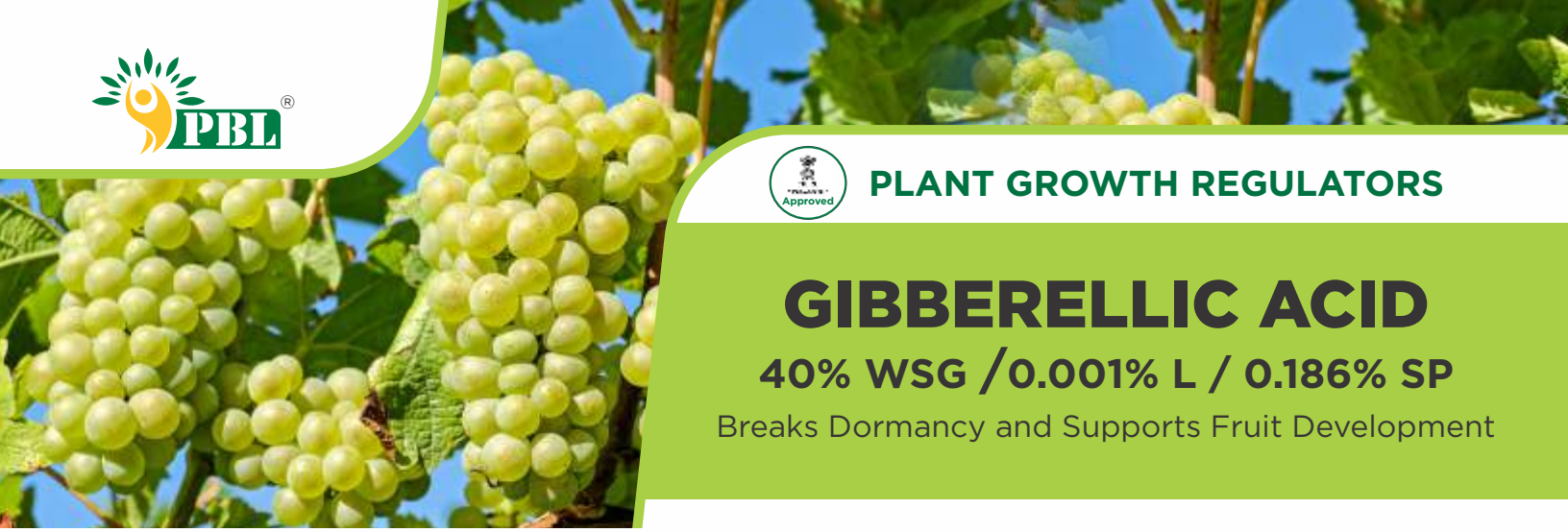

PLANT GROWTH REGULATORS

GIBBERELLIC ACID

40% WSG /0.001% L / 0.186% SP

Breaks Dormancy and Supports Fruit Development

Gibberellic Acid is a naturally occurring plant hormone, commercially produced through the fermentation of fungi. As a tetracyclic diterpenoid, it serves as a highly effective Plant Growth Regulator. While naturally present in plants, its concentration can be a limiting factor for optimal growth. Application of exogenous Gibberellic Acid can correct deficiencies and promote growth in plants exhibiting slow or stunted development.

Benefits:

- Overcoming Dormancy: Pre-sowing treatment of seeds or tubers with Gibberellic Acid helps overcome dormancy and promotes rapid and uniform germination.
- Frost Protection: Spraying fruit trees at full-blossom or at the early withering stage of flowers can reduce the negative effects of frost on reproductive tissues.
- Vegetative Growth Promotion: Foliar spray can enhance vegetative growth by stimulating sustained cell elongation during the active growth season.
- Parthenocarpic Fruit Development: In crops with poor fruit set due to inadequate pollination or fertilization, GA can induce the development of seedless or partially seeded fruits, depending on the species and dose.

Dosage and Recommended Crops:

Formulations	Crops	Dosage (per 500 ltr water)	Time of Application
Gibberellic Acid 40% WSG	Grapes	50 gm	Pre-bloom-elongation | Fruit setting–thinning 6-7 mm berry size enlargement
	Rice	50-62.5 gm	20-25 days after transplanting At panicle emergence
Gibberellic Acid 0.186% SP	Cotton	53.25-71.00 gm	One spray at square formation or early flowering stage
Gibberellic Acid 0.001% L	Grape	180 ml	First: 30-35 days after pruning Second: During the match head stage
	Cotton	180 ml	First spray: 40-45 DAP Second spray: at the time of boll formation
	Sugarcane	180 ml	First spray: 40-45 DAP Second spray: 75-80 DAP
	Cabbage/Cauliflower	180 ml	First spray: 45 DAS Second spray: 65 DAS
	Onion	180 ml	25-30 days after planting
	Ground Nut	180 ml	First spray: 30-35 days after sowing Second spray: At the time of flowering
	Rice	180 ml	Short duration varieties: 20-25 DAT | Medium duration varieties: 30-35 DAT | Long duration varieties: 40-45 DAT
	Banana	270 ml	First spray: 3rd month | Second spray: 5th month Third spray: At the time of fruit formation
	Brinjal, Okra	450 ml	First spray:34 DAP | Second spray: 70 DAP Third spray: 105 DAP
	Mulberry	450 ml	First spray: 15-20 days after harvest Second spray: 25-30 days after first spray

Application Method:

Foliar Spray, Soil Application, and Seed Treatment as per the requirement.

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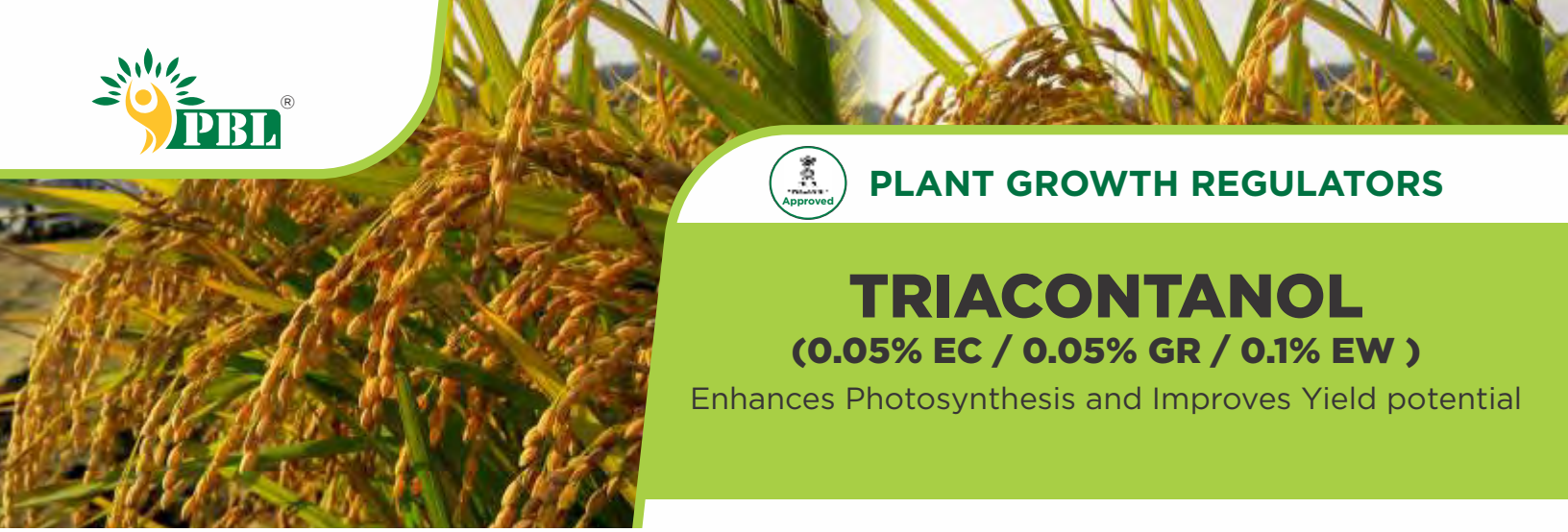


PLANT GROWTH REGULATORS

TRIACONTANOL

(0.05% EC / 0.05% GR / 0.1% EW)

Enhances Photosynthesis and Improves Yield potential

Triacontanol is a natural plant growth regulator found in the epicuticular waxes of plant surfaces. It is a saturated long-chain alcohol known for promoting plant growth when applied externally. It enhances photosynthesis, nutrient uptake, and metabolic activity—leading to improved plant performance.

Triacontanol also boosts the production of amino acids, proteins, and sugars like glucose. When applied during peak growth stages, it increases enzymatic activity in roots and supports hormone function. This results in better sugar transport to the root zone, stimulating microbial activity and improving nutrient exchange between plants and soil microbes.

Benefits:

- Enhances the photosynthetic rate in plants, promoting vigorous growth and development.
- Improves protein biosynthesis, contributing to higher yield potential.
- Boosts nutrient transport and enzyme activity within plant tissues.
- Stimulates seed germination and promotes healthy root development.
- Increases mitochondrial energy production efficiency in plant cells.
- Facilitates stomatal opening for improved gas exchange.

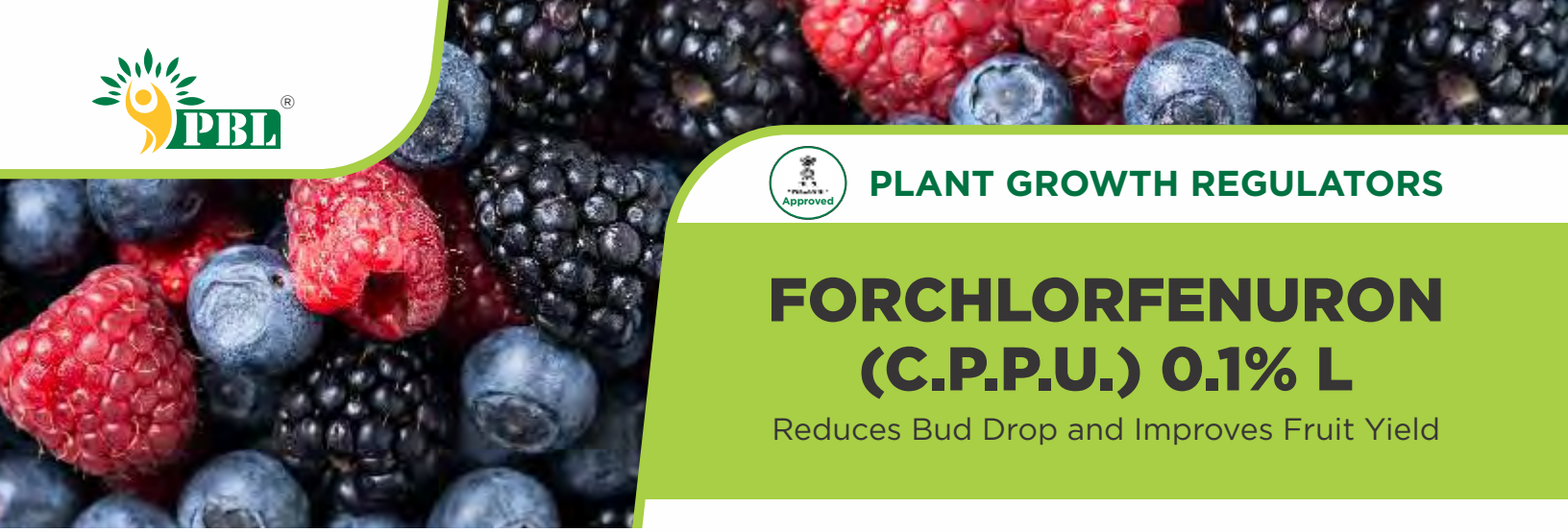
Dosage and Recommended Crops:

Formulations	Crops	Dosage /Acre	Dilution in Water (ltr)	Time of Application
Tricontanol 0.05% EC	Potato	200 ml	200-240	1st spray-25 days after planting | 2nd spray-45 days after planting preferably at tuber initiation or tuber bulking
	Tomato, Rice, Chilli, Groundnut	100 ml	160-200	1st spray-25 days after planting | 2nd spray-45 days after planting | 3rd spray-65 days planting in Rice and Groundnut
	Cotton	100 ml	160-200	1st spray-45 days after planting | 2nd spray-65 days after planting | 3rd spray-85 days after planting
Tricontanol 0.1% EW	Potato	200 ml	200-240	1st spray-45 days after planting | 2nd spray-65 days after planting | 3rd spray-85 days after planting
	Tomato, Rice, Chilli, Groundnut	100 ml	160-200	1st spray-25 days after planting | 2nd spray-45 days after planting 3rd spray-65 days after planting in Rice and Groundnut
	Cotton	100 ml	160-200	1st spray-45 days after planting | 2nd spray-65 days after planting | 3rd spray-85 days after planting
Tricontanol 0.05% GR	Cotton, Tomato, Rice, Chilli, Groundnut	10 Kg	-	Broadcast & mix the desired quantity of granules in soil 2-3 days before sowing or transplanting

Application Method:

Can be applied via foliar spray or soil drenching, depending on crop requirements and growth stage.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.



PLANT GROWTH REGULATORS

FORCHLORFENURON (C.P.P.U.) 0.1% L

Reduces Bud Drop and Improves Fruit Yield

Forchlorfenuron (C.P.P.U.) is a highly active cytokinin-like Plant Growth Regulator that promotes chlorophyll biosynthesis, cell division, and cell expansion. Chemically known as N-(2-Chloro-4-pyridyl)-N′-phenyl urea, CPPU is a synthetic phenyl urea derivative that enhances plant growth by inhibiting cytokinin oxidase—an enzyme that deactivates cytokinins. It works synergistically with natural auxins to stimulate cell proliferation and lateral growth.

Benefits:

- Increases berry size in grapes significantly.
- Strengthens pedicel (cap-stem) attachment, reducing pre-harvest drop.
- Delays maturation to improve quality in late-season varieties.
- Improves quality of seeded grapes for the fresh fruit market.
- Enhances fruit set and may influence drying ratio due to increased berry water content.

Dosage and Recommended Crops:

Crop	Dosage/acre	Time of Application
Grapes	400 ml/200 ltr of water	Dip Grape Berry Bunch 1st Treatment: When berry size is 3-4 mm diameter 2nd Treatment: When berry size is 6-7 mm diameter

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

PLANT GROWTH REGULATORS

ETHEPHON 39% SL

Accelerates Ripening for Faster Harvests

Ethephon 39% SL is a versatile Plant Growth Regulator that enhances fruit coloration and promotes uniform ripening in fruits like tomatoes, mangoes, and pineapples. It also serves specific agronomic purposes such as breaking alternate bearing tendencies in mango trees and inducing defoliation in pomegranates.

Mode of Action:

It is a systemic Plant Growth Regulator that penetrates plant tissues and is translocated within the plant. It gradually decomposes into ethylene, a plant hormone that positively influences various growth and ripening processes.

Benefits:

- Enhances fruit coloration and promotes uniform ripening in crops like pineapple, mango, tomato, and others.
- Facilitates flower induction and helps in breaking alternate bearing cycles in mango.
- Improves latex yield in rubber by increasing the flow of latex through controlled application.

Recommended Crops and Application Time:

Crop	Purpose	Time
Mango	For breaking alternate bearing tendencies	First spray in mid-October or early November total 5 spray at fortnightly interval
Mango	For flower induction	Commencing from early November total 5 sprays at weekly interval
Mango	Post-harvest treatment	Dip mature fruits in the solution for uniform ripening. One treatment is required
Pineapple	For flower induction	30-37 leaf stage or 10-12 months. One spray is required
Coffee (Arabica & Robusta)	For uniform ripening of berries	One spray at fly picking stage when 10-15% of berries have ripened
Tomato	Post-harvest treatment	Post-harvest treatment can be done by dipping once
Rubber	To boost latex yield	March, August, September, November (four applications) brushing once in two months on the tapping cut of the bark
Pomegranate	Defoliation for better flowering and fruit yield	One spray around one month before Mrig bahar (June-July), Hast bahar (October-November) or Ambe bahar (December-January).

Dosage:

Crop	Dosage (ml/Ha)	Dilution in water (ltr)
Mango (For flower induction in juvenile mango)	3846-5128	1500-2000
Mango (Post harvest treatment)	1923-2564	1500-2000
Mango (For breaking alternate bearing tendencies)	770-1025	1500-2000
Pineapple	385-513	1500-2000
Coffee (Arabica)	738-985	1500-2000
Coffee (Robusta)	215-287	1500-2000
Pomegranate	1000-1250	500

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.

ADJUVANT / SPREADER

Silicone Adjuvant & Spreader

Improves Coverage for Enhanced Uptake

Silicone Adjuvant & Spreader is a low molecular weight, non-ionic silicone polyether adjuvant surfactant. The key active ingredient is polydimethylsiloxane, known for its ability to improve wetting, spreading, and penetration. Silicone Adjuvant & Spreader is widely used in agriculture to enhance the performance of foliar-applied agrochemicals. It can be used as a formulation ingredient in pesticide products or as a tank-mix adjuvant.

Application:

It is primarily used to improve the performance of agricultural chemicals, especially water-soluble broadleaf Herbicides, Insecticides, Fungicides, and Plant Growth Regulators.

As an adjuvant, it enhances the pesticide's effectiveness by reducing surface tension, which increases the wetting area on the leaf surface and improves rainfastness—i.e., the chemicals are not easily washed off by rain, as they penetrate the plant cuticle effectively.

Benefits:

- Stable neutral pH (7.0).
- Enhances biological formulation performance.
- Functions as a highly effective emulsifier, compatible with aqueous, alcoholic, or solvent-based products.
- Significantly reduces surface tension for improved coverage.
- Rapidly soluble in water, alcohol, and hydroalcoholic solutions.
- Provides excellent foam control.
- Non-ionic nature ensures compatibility with a wide range of agrochemical formulations.
- Offers super-spreading, wetting, and penetration action.
- Enhances uptake and efficacy of pesticides, herbicides, insecticides, fungicides, plant growth regulators, bio-fertilizers, and bio-pesticides by improving penetration into plant tissues—especially effective in herbicide applications.
- Minimizes plant stress by enhancing input absorption, promoting healthier growth and improved yield.

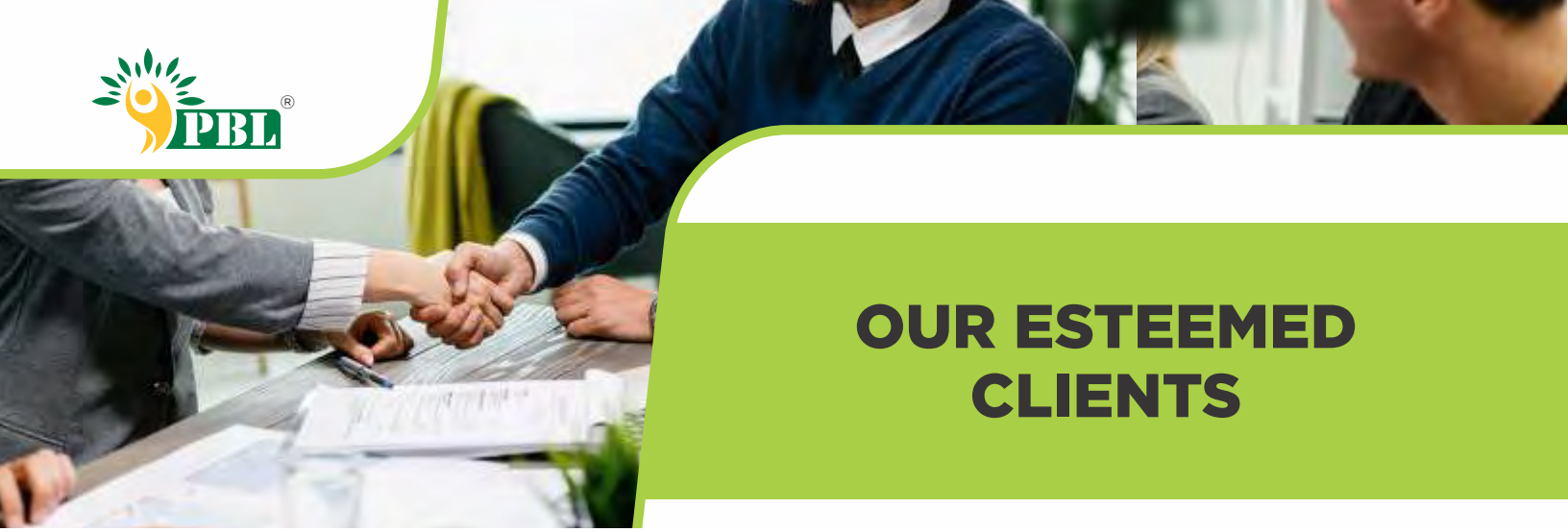
Product Parameters	Specifications
Appearance	Clear amber color fluid
Viscosity at 25°C	40 CST
Flash Point	>101°C
Solid Content %	100%
pH	7.0
Surface Tension (0.1% mN/m)	21.5
Density	1.02

Use:

- Used at a very low dosage of 3–5 ml per 15 ltr tank.
- Improves the overall biological efficacy of agrochemical sprays.

Note: It is more effective when the tank premix is within pH 5-8 and should be used within 24 Hours.

*The application method is solely for guidance purposes. Application rates may vary due to climate, frequency, soil, etc.
We encourage users to conduct their own testing in order to determine what is best for their crop under specific conditions and environments.



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