



MiklensBio™
A New Hope



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Registered Office :

Miklens Bio Pvt. Ltd.

Sparsh, No. 3, Divine Bungalows, Marian Colony,
Borivali West, Mumbai - 400 103. India

Corporate Office :

73/1, Appajapa layout Cheemasandra, Near Avalahalli-
Hoskote Main Road, Virgonagar, Bengaluru-560049.

Customer Care No.: +91 9900449004

Email : care@miklensbio.com | Web : www.miklensbio.com



A Make In India Initiative

Introduction

Started in August 2016 and headquartered in Mumbai, Miklens Bio Pvt. Ltd. is all set to become an eminent name in the field of agricultural innovation and a pioneer in Residue Free Cultivation. At Miklens Bio, we develop products that boosts agricultural yield, while keeping human health and environmental sustainability in mind.

Miklens Bio has a clear goal – to help solve the global food security problem and to provide a safe and healthy alternative to farming. Miklens Bio has focussed its efforts in this direction to come up with viable solutions to these global problems. For realising these objectives, we concentrate our efforts and resources in researching and developing products that aid the abundant growth of highly nutritious crops, without causing any harm to the environment. Miklens Bio strongly advocates the philosophy of responsible agricultural practices. Its technology portrays the idea of “Farming with naturally driven microbes” with a goal to reduce the dependence on toxic chemical pesticides.

Our wide range of products are developed by the mix of carefully preserved traditional knowledge with the latest scientific advancements. Miklens Bio is dedicated to bringing to the market agricultural products that are globally accepted because of the positive impact they have on farming communities, and on the society.

What we do?

Miklens Bio is on the fast track to become world’s best organisation in the “Pure Bio” segment. The research focus is to develop and manufacture various biotechnology based agricultural inputs to cater to the demands of the farmer community by promoting the effective advantage of bio based agri-inputs.

We at Miklens Bio are embarked on a journey to bring about a change in the agricultural canvas across the globe. To achieve this, we are dedicated to research and develop new products which are eco-friendly, safe & helps in increasing the yields of the farmer community.

Miklens Bio has mastery in developing products which helps in Residue Free Cultivation. This advocates the use of products based on secondary metabolites derived from microbial sources. Besides being perfect natural replacements for chemical pesticides, these products are cost effective as well and assimilate into the ecosystem without leaving any toxic residue. Unlike broad-spectrum synthetic chemicals, these products work specifically against certain target organisms, without harming beneficial organisms.

What we offer?

Miklens Bio is instrumental in developing solutions for a better future by manufacturing bio-agri inputs which are safe for the environment and the society at large. We are the experts in researching and developing products that are used for agricultural applications. Our offerings help the farmer community to increase their productivity, reduce their chemical input dependency and reduce the environment load due to chemicals.

Our wide range of products are developed via the microbial route which helps in providing a sustainable edge to the society and the environment. Our ground breaking products are a boon for the farmers, consumers and other stakeholders, benefitting the entire agri-value stream. They are safe, biodegradable, residue-free, and cause no harm to the environment.

Most importantly, our innovation is cost-effective, providing a natural affordable solution with better efficacy, thus helps in maintaining the natural ecosystem.



Infrastructure

R&D Facilities – Overview

Research is the key ingredient for any successful innovation and Miklens Bio has made research as its forte for the development of various Residue Free products. Our team of in-house skilled scientists are dedicated to develop products that has the potential to change the agricultural landscape of our country.

Since its inception in August 2016, Miklens Bio has been instrumental in its research process which led to the development of 5 novel products with many new products in pipeline. Miklens Bio believes in the philosophy of responsible agricultural practices and thus its products are derived from microbes which are freely available in the environment. Our products are derived from the research based on microbes, which nourishes the soil and makes it fertile, thereby boosting the plant growth. Our research has a strong base in creating a critical component for the agricultural community to remain economically viable and environmentally safe.

Our Technology

Micro-organisms live in a world of chemical signals. Microbial bio-products represents an incredibly diverse array of chemistry. Over 25000 microbial bio-products have been reported in scientific literature, however only 2% of these have ever been readily available to the wider research community. Most bio-products have only existed in small quantities in research laboratories and their biological activities have never been fully investigated except for some successful compounds used in pharmaceutical industry.

Through the fermentation technology, Miklens Bio has been able to purify the right compound from microbial sources which are effective against major pest and disease.

Through research, Miklens Bio has been successful in deriving nitrogen, phosphorous and potash elements through bio-engineering process which acts in supplementing the nutritional requirement of the plant which till date is available only in synthetic form for large scale consumption.

The bio-products are unique in terms of its longer shelf life with efficacy as good as any synthetic counterpart.

While there are bio companies involved in similar research, most of them are limited to produce crude extracts. We have nurtured the art of purifying essentials from these crude extracts which is first of its kind in agriculture.

Uniqueness of Our Technology

Considering the present agricultural scenario which is based on the haphazard use of chemical, our biotechnologically backed products helps to improve the agriculture and the food insecurity issues arising due to tremendous population rise in a very sustainable manner.

“Pure Bio” is a concept which we bring to reality. We remain adamant to bring a revolution to the way agriculture is done in India. Our proprietary technology of research based on microbes has led to the developments of products which are residue free, not at all toxic in nature, boosts productivity without causing any harm to the environment, improved quality of the produce and eventually increased profitability.

Our Products

Miklens Bio makes use of their expertise in the field of biotechnology to provide products which are effective thereby improving the value offerings to the farmers in terms of improved yields, better crop quality and ultimately their revenue.

Miklens Bio's research process is focussed on the microorganisms (microbes) available in the surrounding and thus is successful in developing specialised range of bio-agri inputs. Our products are tested and provides a seal of assurance with regards to improved yields and improving the quality of the land, soil and overall environment.

Miklens Bio Products Benefits:

- Increased yields
- Improved crop quality
- Increased revenue
- Residue Free Cultivation
- Reduced health hazards
- Environmental protection

Product Categories:

- Plant Protection
- Plant Growth Enhancer
- Bio-Pesticides
- Bio-Fertilizers

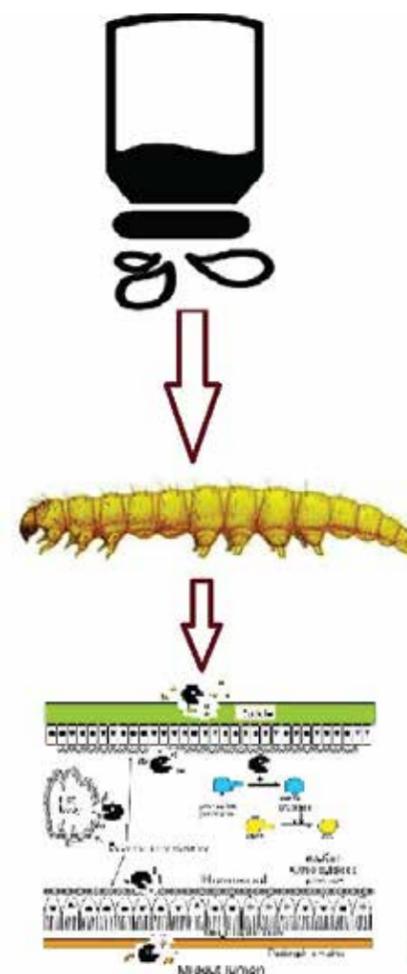
Bio-Pesticides

Miklens bio-pesticides are recommended against root grubs, termites and nematodes, and has its monopoly in the soil borne inhabiting pest management segment. We are also conducting research on bio fumigation properties.

Mikroot

Mikroot is a unique combination which is a blend of microbial extracts and plant derived extracts. Mikroot is a very strong yet an organic solution for soil pests that feed on roots and cause immense economic loss in agricultural crops. MikRoot is the only comprehensive solution to all the soil pests like white grubs, termites, wireworms and nematodes.

MikRoot works quite effectively against all these pests through its unique mode of action through ingestion and also as contact properties. In ingestion, MikRoot enters the gut and damage the epithelial layers of the digestive system thereby resulting into septicemia leading to death of the pest Mikroot disrupts the formation of polysaccharide formation resulting in malformed cuticles, lacking normal exoskeleton properties causing mortality.



Mode of action

Disrupts the formation of polysaccharide formation resulting in malformed cuticles, lacking normal exoskeleton properties causing mortality.

Dosage & Application

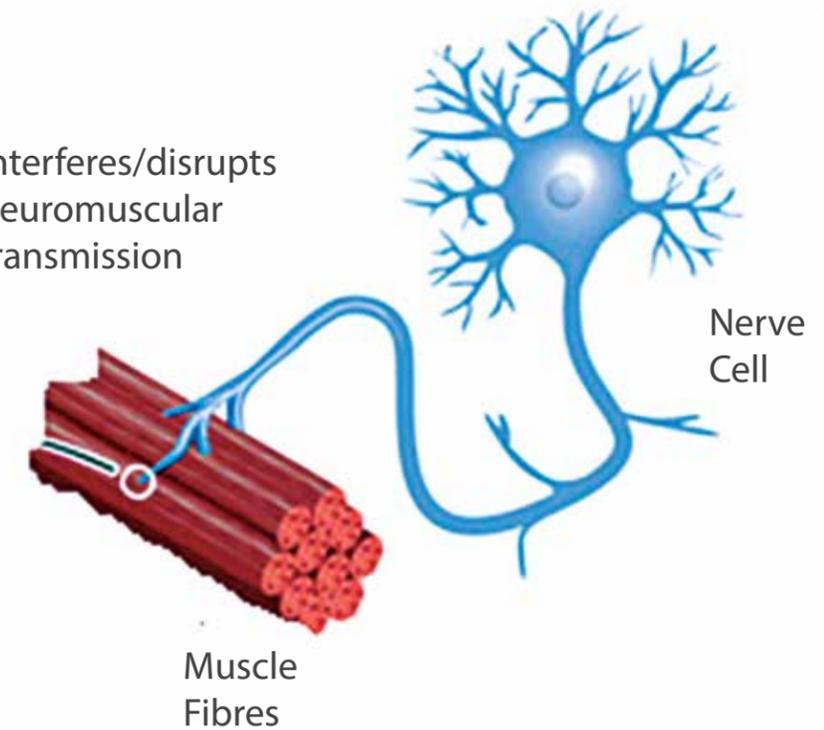
Soil application of Mikroot 50% Dust @ 10g/litre may be mixed with the soil 10-15 cm deep as a pre-sowing soil treatment preferably as drenching. Repeated application at fortnightly intervals helps in longer control period.



MikBiofume

MikBiofume is a bio fumigant which is a blend of plant and microbial extracts showing high Insect toxicity on these stored pests with no residual persistence. The product being organic in origin has low mammalian toxicity with no environmental hazards.

Interferes/disrupts neuromuscular transmission



Mode of action

MikBiofume contains mixture of gases that can potentially act as disinfest and cause mortality under enclosed conditions. The product effectively controls all stages of the insects present in or amongst the grains under controlled conditions.

Dosage

Tablet 15gm/50-100kg of grain

Effective against Tribolium castaneum (rust red flour beetle), *Tribolium confusum* (confused flour beetle) *Sitophilus oryzae* (rice weevil), *Sitophilus zeameas*, *Callosobruchus chinensis* (pulse beetle), *Corcyra Cephalonica* (rice moth), *Lasioderma sps*(cigarette beetle), *Sitotroga sps*,

Longivity – 3-4 months

LD 50 - >3500mg/kg

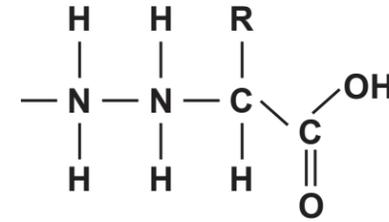
Plant Growth Enhancer

MikNaturals

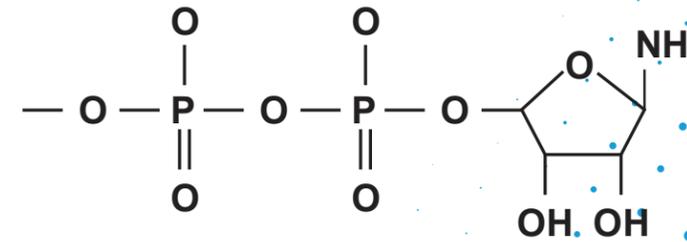
MikNaturals is one a kind offering from Miklens Bio which can supplement the nutrient requirement of the crop with less or no dependency on chemical fertilizer. We at Miklens Bio have exploited the unique characteristic of microbial by-products and have developed a fertilizer composition ideal for plant growth with no harmful environmental hazards. The NPK combination derived through this process is between 10-12% in purely water soluble form. The presence of organic carbon (approx. 40%) adds value to the product, which is almost nil in the case of chemical fertilizers. The product is recommended for all crops and suitable as both foliar and soil application.



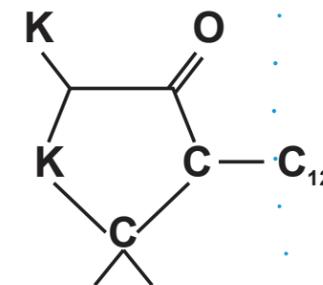
Nitrogen



Phosphorus



Potassium



Uniqueness of MikNaturals

- Soil microbes is one of the most important components to enhance nutrient cycling to sustain crop productivity. MikNaturals helps in replenishing this property to maintain a balanced ratio of microbial biomass and plant growth.
- The organic carbon content in the product is >40%. This high organic carbon content in MikNaturals helps in increasing the soil properties maintaining fertility.

Dosage

Foliar : 3gm/ltr Drip : 5gm/ltr

Mode of action

The nitrogen in MikNaturals contains either protein nitrogen or urea nitrogen or both at the same time, which both is produced by microbes during exponential growth phase, declaration phase, stationary phase and even at decline phase.

Despite P and K available in enormous quantity in the soil majority of P and K remain bounded to the soil particles leading to non availability thus creating nutrient deficiency in plants. MikNaturals helps in creating a conducive environment in enriching the soil microbe flora thereby increasing the uptake of required nutrient.

Due to the strong complex carbon chains present, the release pattern is comparatively prolonged under field conditions while it is at a faster rate in the case of chemical fertilizer which leads to loss of nutrients either through seepage or runoff.

Advantages of MikNaturals

- Being naturally synthesized through microbes, helps in production of high quality produce in harmony with natural systems and cycles
- Helps in enhancing biological cycles within the farming system
- Maintain long-term soil fertility and genetic diversity
- Minimize all forms of pollution.



Mikcon

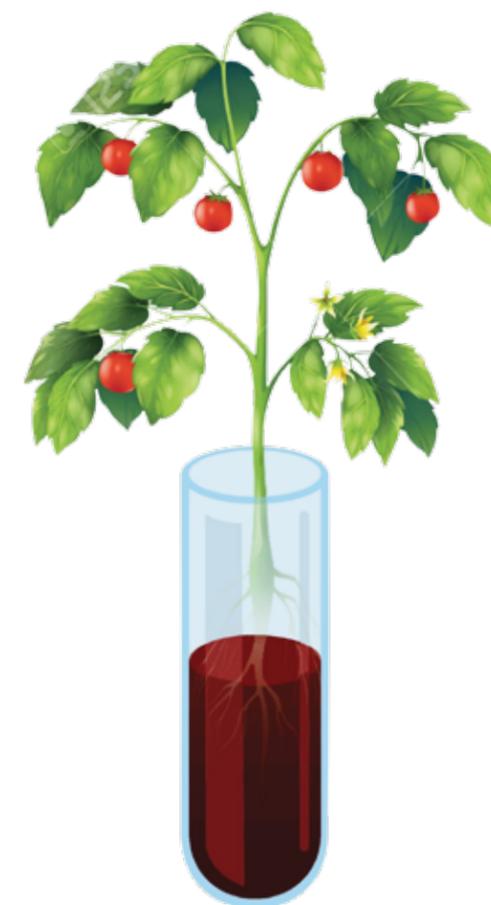
Mikcon is a Plant Growth Enhancer / Regulator with the following characteristics :

- It contains microbial by-products which are rich in PGA, amino acids, phytohormones and other growth regulators in optimum level.
- It is also blended with anti-microbial properties that gives protection against various pests and disease.
- It has inherent property to tolerate against drought, salinity and pest resistance
- It helps in stimulating nutrient delivery and uptake.
- It delivers plant mediated disease suppression
- Mikcon is recommended for all crops

Functions

A speciality PGR for crops grown in soil and artificial growing media Mikcon delivers essential elements to crops for general maintenance of nutrient levels, encourages vigorous root establishment, promotes balanced healthy vegetative growth with abundant flower formation.

Helps in increasing shelf life. The major component PGA in Mikcon helps in improving the water filled porosity, water holding capacity, EC value, and the contents of $\text{NH} + 4 -\text{N}$, $\text{NO} - 3 -\text{N}$, P, readily available K, exchangeable Mg, and reduces the pH values. At the seedling growth stage, PGA increases the available N, P, K and Mg contents in the substrate, and especially improves the activities of phosphatase and catalase at the later growth stage. PGA contributes to the increased chlorophyll contents with high root activity.



Mikdew

Mikdew Is a microbial based fungicide effective against oomycetes group of fungi like Pythium, Phytophthora, Plasmapara etc, that causes deadly diseases like late blight and downy mildew. MIKDEW is equally effective against soil borne pathogens like Fusarium, Rhizoctonia, Sclerotium etc that cause wilt disease. The product performs well on all crops under different agroclimatic conditions.



Mode of action

Mikdew is a fungicide that contain systemic compounds and helps in translocation both basipetally (downward) and acropetally whether applied to roots or leaves. Inhibits the pathogen cell wall formation thereby causing destruction of cell integrity which leads to cell death.

Dosage

Liquid: 1ml/ltr, 100ml/acre
Shelf life : 3yrs

Management



Santosh Nair

FOUNDER AND MANAGING DIRECTOR

Mr. Santosh Nair is a graduate from Mumbai University in 1991 with a specialization in Chemistry. He chose Finance as his mainstream while obtaining his Master's degree in management from the reputed NMIMS in 1998 and has an Executive Degree from IIM-A.

Mr. Santosh Nair has wealth of experience (nearly 2 decades) in the banking and finance organisations and has worked with giants like Merrill Lynch and HDFC. At Merrill Lynch, he was part of Global wealth management group and managed Indian business for the group. He spent more than a decade in HDFC Bank as Head - Retail Banking and managed retail branches for western region. The growing competition in retail banking led Mr. Santosh Nair to handle the larger role as Head of Retails Banking (South India) to bring up the retail banking in South India.

After moving to Bangalore, he realised technology to be a key aspect for the growth of agriculture in India and wanted to provide revolutionary avenues to the farmers to increase their productivity and also help maintain the ecology. This thought later shaped into forming of Miklens Bio. With his experience and keen understanding of the world of business and finance, he is involved in making the presence of Miklens Bio felt over wider regions of India and across the globe. His passion for clean agriculture makes him the perfect advocate for Residue-Free Cultivation.