

Food as medicine !



**Horizon**  
AgroTech



explore excellence  
at micro level is  
innovation.



explore excellence  
at micro level is  
innovation.

# MOLECULAR MOVEMENT

## INTRODUCTION:

Founded in **1997, at Dindori (Nasik), Maharashtra (INDIA)** under the guidance of our Chairman and CEO “**Mr. Vivek Kapadnis**” our company has grown tremendously over the years. We are the leading manufacturer of agro chemicals and products. We are also into import and export of our products with our strong network abroad. Our turnover is about INR 40 Crores which reflects our brand standings and acknowledgment.

We have some of the best in manufacturing facilities at Dindori (Dist. Nasik) Maharashtra, India to cater the needs of our clients. Our large network of business covers the areas like **Indian Subcontinent, Middle East and South east & East Asia**. We have successfully formulated quality products like Magnesium Sulphate Heptahydrate, Magnesium Oxide Chemicals and Fertilizer Micronutrients as per Fertilizer Control Order (FCO) and thus ensured our brand development over the years.

We are also an active participant in the trade shows like **Krishi and Polvet**.

## PRODUCT PORTFOLIO:

MICRONUTRIENTS & METAL SALTS

EDTA CHELATES

AMINO ACID GROUP

HUMIC ACID GROUP

PLANT GROWTH REGULATORS

FOOD AS MEDICINE

PEST & DISEASE CONTROL SERIES

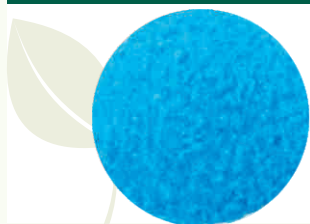
PROCESSING AIDS



## MICRONUTRIENTS & METAL SALTS

Every micronutrient has specific roles to play in the plants. Their presence in optimum concentration is a must for the plant to complete its life cycle that ends with maturity and harvesting of the economic produce. Micronutrients are essential plant mineral nutrients taken up and utilized by crops in very small quantities. Traditionally, we have relied on what was present naturally in the soil together with amounts added as impurities in fertilizers and pesticides as the source of micronutrients for crop growth. In recent years however, deficiencies of micronutrients have been diagnosed more frequently; and many farmers are beginning to take a closer look at their general availability. It is extremely important to be able to recognize and correct micronutrient deficiencies. When micro-nutrients become limiting factor water, fertilizer and other high-energy production inputs may be wasted, since a plant will only grow and develop to the extent that its most limiting growth factor will allow

### Copper Sulphate



Item code	Ag 27
CAS NO	7758-99-8
Common name	Cupric Sulfate
Molecular formula	$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
Molecular weight	249.68
Appearance	Blue crystalline powder
% as.....	% as Cu..... Min 24.5 %

### Manganese Sulphate



Item code	IMn01
CAS NO	7785-87-7
Common name	Manganese Sulfate
Molecular formula	$\text{MnSO}_4 \cdot \text{H}_2\text{O}$
Molecular weight	169.02
Appearance	pale pink crystalline
% as.....	% as Mn.....Min 32%

### Cobalt Sulphate



Item code	Ico01
CAS NO	10124-43-3
Common name	Cobalt Sulphate
Molecular formula	$\text{CoSO}_4$
Molecular weight	281.10
Appearance	Wine Red Crystalline Powder
% as.....	% as Co..... Min 21.05 %

### Zinc Sulphate

Zinc is a necessary micronutrient required in protein synthesis and for ensuring seed quality and uniform maturity. Zinc deficiency is common in high pH, Calcareous and low organic matter content soils. To rectify the deficiency and as a nutrient we provide the product in various physical forms and purities as per the application.

#### Zinc Sulphate Monohydrate



Item code	IZn03
CAS NO	7446-20-3
Common name	Zinc Sulphate Mono
Molecular formula	$\text{ZnSO}_4 \cdot \text{H}_2\text{O}$
Molecular weight	179.445
Appearance	White Free Flowing Powder
% as.....	% as Zn.....Min 33 %

#### Zinc Sulphate Heptahydrate



Item code	IZn01
CAS NO	7446-20-3
Common name	Zinc Sulfate Hepta
Molecular formula	$\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$
Molecular weight	287.55
Appearance	White crystalline powder
% as.....	% as Zn.....Min 21%

#### Magnesium Sulphate Heptahydrate



Item code	MgSO4
CAS NO	7487-88-9
Common name	Magnesium Sulphate
Molecular formula	$\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$
Molecular weight	246.47
Appearance	White granular crystalline
% as.....	% as Mg.....9.6% Min

## MICRONUTRIENTS & METAL SALTS

### Entire range of Ferrous Sulphate

#### Ferrous Sulphate Heptahydrate -19%



Item code	IFe03
CAS NO	7720-78-7
Common name	Ferrous Sulphate Hepta(Crystal)
Molecular formula	FeSO <sub>4</sub> .7H <sub>2</sub> O
Molecular weight	278.01
Appearance	Greenish Crystalline
% of Iron (Fe)	MIN 19 %

#### Ferrous Sulphate Monohydrate-21%



Item code	Ife02
CAS NO	7720-78-7
Common name	Ferrous Sulphate Mono 21%
Molecular formula	FeSO <sub>4</sub> .H <sub>2</sub> O
Molecular weight	169.93
Appearance	Greenish white powder
% of Iron (Fe)	Min 21%

#### Ferrous Sulphate Monohydrate-30%



Item code	IFe01
CAS NO	7782-63-0
Common name	Ferrous Sulphate mono 30%
Molecular formula	FeSO <sub>4</sub> .H <sub>2</sub> O
Molecular weight	----
Appearance	Light Greenish White Powder
% of Iron (Fe)	MIN 30 %

### Boron Specialities

Boron is an essential micronutrient for plant growth. Boron fertilizers mixed with other compounds or NPK fertilizers are useful boron-deficient soils. Boron compounds are widely used in agriculture & forestry for fertilizing crops and combating unwanted herbs & pests.

#### Principle applications are:

**Fertilizer** : As micronutrients, applied directly or as compound, a low concentration application,

**Appearance** - White free flowing powder

### Borax



#### Boron 20

Boron 20 is also known as DOT i.e Disodium octaborate tetrahydrate(DOT) which is specially made for agricultural applications is the most preferable boron product in agriculture since it has much better solubility compared to the conventional boron products like borax decahydrate & borax pentahydrate.

#### Boric Acid

Many pesticides and fertilizers used for farm use contain boric powder as an ingredient, and so do most of the chemicals that are used to thwart rodents, insects and pests from infesting the crops.

#### Borax Decahydrate

Borax decahydrate is most widely used borates as boron fertilizer. Borates can be used directly into the soil or by spraying onto plants successfully because of their good solubility.





## EDTA CHELATES

EDTA is extensively used initialism for the chemical compounds ethylene di amine tetra acetic acid. The usefulness of compound arises because of its role as a chelating agent, i.e. its ability to "sequester" metal ions. We can offer EDTA in variety of grades and compositions based upon the requirement of the clients.

### EDTA di sodium



Item code	<b>EDTA Di Na</b>
CAS NO	139-33-3
Common name	DI SODIUM EDTA
Molecular formula	$\text{Na}_2\text{C}_{10}\text{H}_{16}\text{N}_2\text{O}_8$
Molecular weight	372.2
Description	White crystalline powder
Chelation value	as mg of $\text{CaCO}_3$ is 270

### EDTA Tetra sodium



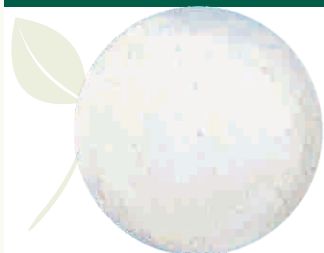
Item code	<b>EDTA TETRA Na</b>
CAS NO	64-02-8
Common name	TETRA SODIUM EDTA
Molecular formula	$\text{Na}_4\text{C}_{10}\text{H}_{16}\text{N}_2\text{O}_8$
Molecular weight	416.0
Description	White crystalline powder
Chelation value	as mg of $\text{CaCO}_3$ is 230

### EDTA Pure acid



Item code	<b>EDTA Pure acid</b>
CAS NO	60-00-04
Common name	EDTA Pure acid
Molecular formula	$\text{C}_{10}\text{H}_{16}\text{N}_2\text{O}_8$
Molecular weight	292.2
Description	White crystalline powder
Chelation value	as mg of $\text{CaCO}_3$ is 330

### Chelated Zinc



Item code	<b>ZnNa2EDTA</b>
CAS NO	14025-21-9
Molecular formula	$\text{C}_{10}\text{H}_{12}\text{N}_2\text{Na}_2\text{O}_8\text{Zn}$
Molecular weight	399.58
Appearance	Off white powder
% as.....	% as Zinc .....12 % min

### Chelated Manganese



Item code	<b>MnEDTA</b>
CAS NO	15375-04-5
Molecular formula	$\text{C}_{10}\text{H}_{12}\text{N}_2\text{Na}_2\text{O}_8\text{Mn}$
Molecular weight	81.37
Appearance	Pinkish white powder
% as Mn.....	% as Mn.....12.0 % min

### Chelated Iron

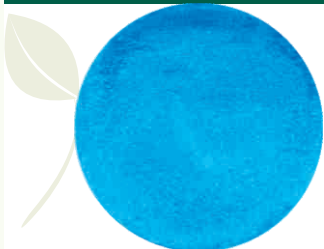


Item code	<b>FeEDTA</b>
CAS NO	15709-41-5
Molecular formula	$\text{C}_{10}\text{H}_{12}\text{N}_2\text{Na}_2\text{O}_8\text{FeH}_2\text{O}$
Molecular weight	281.10
Appearance	Yellowish Brown powder
% as Fe ....	% as Fe ....12 % min



# EDTA CHELATES

## Chelated Copper



Item code	<b>Cu-EDTA</b>
CAS NO	14025-15-1
Common name	Chelated Copper EDTA
Molecular formula	$\text{CuNa}_2\text{EDTA}$
Molecular weight	425
Description	Light Blue Powder
% as.....	% as Cu..... Min 13.5%

## Chelated Magnesium



<b>Mg-EDTA</b>
14402-88-1
Chelated Magnesium EDTA
$\text{C}_{10}\text{H}_{12}\text{N}_2\text{Na}_2\text{O}_8\text{Mg}$
358.51
Off White Powder
% as Mg..... Min 6.0%

## Chelated Calcium



<b><math>\text{CaNa}_2\text{EDTA}</math></b>
62-33-9
Chelated Calcium EDTA
$\text{CoNa}_2\text{EDTA}$
-----
Off White Powder
% as Ca..... Min 10%



## AMINO ACID GROUP

The requirement of amino acids in essential quantities is well known as a means to increase yield and overall quality of crops. Foliar Nutrition in the form of Protein Hydrolysate (Known as Amino Acids Liquid) and foliar spray provide readymade building blocks for Protein synthesis.

Amino Acid is a Bioorganic nutritional product derived from vegetable source (SOYA) required for plant growth promotion and for higher yields. It promotes hormonal activity and induces their synthesis resulting into flowering and fruit setting. It also reduces the flower and fruit drop caused by hormonal imbalance. It enhances nutritional uptake and their utilization, which improves the color, size, luster and taste of fruits. It also improves keeping quality. It is an ideal product to resist from adverse conditions.

### AMINO ACID – 80 %



Physical Appearance	<b>Creamish Colored</b> Spray Dried Free Flowing Powder
Total Protein (%)	80 % w/w MIN.
Moisture (%)	7 % MAX.
Bulk Density	0.50 – 0.75 gm/cm <sup>3</sup>
Protein Nitrogen	12 % w/w Min.

### AMINO ACID – 50 %



#### Features & Uses:

Helps in better crop spread. Induces flowering and reduces flower drop. Improves fruit set and reduces fruit drop. Improves fruit size, quality & colour. Advances maturity and increases the keeping quality. Gives drought resistance, Thereby it increases to significant extent.



### Amino Mix



Description	A Fine free flowing spary dried powder containing anino acids, short chained peptides derived from high quality proteins by hydrolysis.	
Colour	Buff bluish greenish colour powder	
Solubilllity	2% solution in distilled water is clear	
Ph of 2% solution	4.50-6.50 at 27 dgree c	
Total Nitrogen	NLT 8.63% W/W/By KJELDAHL'S Method	
Total Protein	NLT 55.00% W/W/ By KJELDAHL'S Method	
Iron (Fe)	NLT 2.0%	<b>We can provide tailor made formulation as per clients requirement.</b>
Zinc (Zn)	NLT 5.0%	
Copper (Cu)	NLT 0.5%	
Manganese (Mn)	NLT 1.0%	
Boron (Bo)	NLT 1.0%	

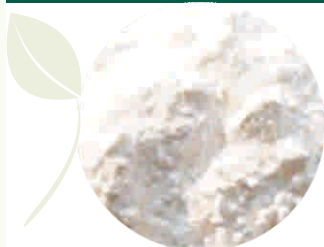




## AMINO ACID GROUP

### Amino Chelates

#### AMINO CHELEMENT Zn



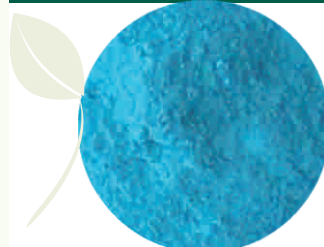
Colour	Off white
Texture	Fine free flowing powder
Content	NLT 10 % to 12 % (Zinc)
Nitrogen	NLT 5 % to 8 %
Bulk Density	0.85 – 0.95 gm/cm3

#### AMINO CHELEMENT Fe



Colour	Brown
Texture	Fine free flowing powder
Content	NLT 10 % to 12 % (Iron)
Nitrogen	NLT 5 % to 6 %
Bulk Density	0.80 – 0.90 gm/cm3

#### AMINO CHELEMENT Cu



Colour	Bluish green
Texture	Fine free flowing powder
Content	NLT 10 % to 12 % (Copper)
Nitrogen	NLT 5 % to 6 %
Bulk Density	0.85 – 0.95 gm/cm3

*NON COMPATIBILITY - Do not use with organic solvents (namely Benzene, Acetone, Alcohols.)*

#### AMINO CHELEMENT Mn



Colour	Off white
Texture	Fine powder
Content	NLT 10 % to 12 % (Manganese )
Nitrogen	NLT 5 % to 8 %
Bulk Density	0.85 – 0.95 gm/cm3

#### AMINO CHELEMENT Mg



Colour	Yellowish white
Texture	Fine free flowing powder
Content	NLT 5 % to 6 % (Magnesium)
Nitrogen	NLT 5 % to 8 %
Bulk Density	0.60 – 0.90 gm/cm3

#### AMINO CHELEMENT Ca



Colour	White to off white
Texture	Fine free flowing powder
Content	NLT 5 % to 6 % (Calcium)
Nitrogen	-----
Bulk Density	0.85 – 0.95 gm/cm3

*NON COMPATIBILITY - Do not use with organic solvents (namely Benzene, Acetone, Alcohols.)*






## HUMIC ACID GROUP

Humic Compounds which are a chief constituent of soil matter, that contributes to soil and increase the fertility of it. It is a high polymer heterogeneous aromatic hydroxyl carboxylic acid which is a black brown powder or granular, insoluble in water and is of weak acidity and easily soluble in alkali.

HUMIC ACID GRANULAR	
	
Parameter	Specification
Physical Appearance	Black Granular
Humic Acid Dry basis %	65.00 % MIN.
Size	2 – 4 mm

HUMIC ACID POWDER- 80%	
	
Parameter	Specification
Physical Appearance	Fine Black Powder
Solubility (%)	95 % MIN.
Humic Acid (%)	80.00 % MIN.

POTASSIUM HUMATE	
	
3 Types are : Potassium Fulvic Humate Shiny Crystals, Potassium Humate (shiny crystal) 90% & Potassium Humate (shiny flakes ) 90%	

**Potassium humate** is obtained by alkaline extraction of lignite or brown coal or leonardite and is used commercially as a soil conditioner.

Also can be used in agriculture as a bio stimulator, stimulates plants growth rate, fishes non-specific and warm-blooded animals specific immunity and adaptive capabilities

Specification	Potassium Fulvic Humate	Potassium Humate	Potassium Humate
	Shiny Crystals	(shiny crystal) 90%	(shiny flakes ) 90%
Physical Appearance	Shiny Crystals	Free flowing Black Shiny crystalline Powder	Free flowing Black Shiny Flakes Powder
Solubility (%)	98 % MIN.	98 % MIN.	98 % MIN.
Humic Acid (%)	65.00 % MIN.	80.00 % MIN.	80.00 % MIN.
Fulvic Acid (%)	15.00 % MIN.	-----	-----
Potassium K <sub>2</sub> O (%)	10.00 % MIN.	10.00 % MIN.	10.00 % MIN.

## SEAWEED EXTRACT POWDER

- 100% Organic & Soluble -

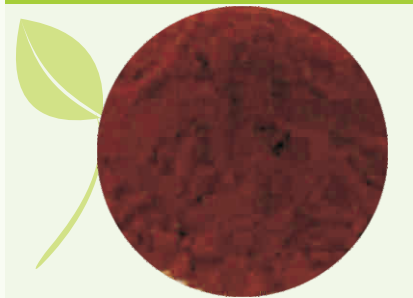
Organic and natural Seaweed Products will give crops all the sustenance needed to be the healthiest and most productive ever and in the most natural way. Seaweed is packed full of goodness that everything in life needs, and provides it all in a balanced and natural level.

Physical Appearance	Average composition	Essential major elements	Essential trace elements
Colour – Black	Moisture - <=5%	Nitrogen - 1.0-1.5%	Copper - 1-6ppm
Odors - Marine Like	Crude protein - 6-8%	Phosphorus - 6-8%	Iron - 50-200ppm
Solubility - 100%	Organic matter - >=40%	Potassium - 18-21%	Manganese - 5-12ppm
Ph - 8-10s	Alginic acid - >=10%	Calcium - 0.15-0.20%	Molybdenum - 1-5ppm
	Mannitol - 4-7%	Sulphur - 1.0-3.0 %	
		Magnesium - 0.2-0.9 %	



PREMIUM PRODUCTS

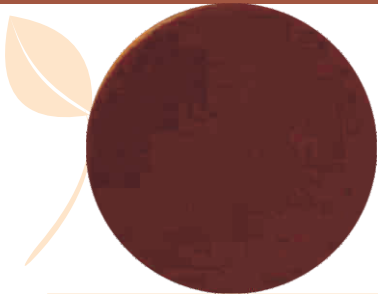
FULVIC ACID



Specification	% (w/w)
Appearance	Dark Brown Powder
pH	6
Fulvic Acid	81 %
Nitrogen (N)	6 %
Amino Acid	2.5%
Water Insoluble Substances	<1%

Fulvic acid is the most plant active of the humic acid compounds. It's a plant growth stimulator that increases plant metabolism, nutrient intake and will help with root development. It is biologically extracted from Humic Acid. Fulvic acid is an excellent supplement to fertilizers to improve nutrient absorption. It is also a source of nutrients for Mycorrhizae. Fulvic acid has always occurred naturally in organic plants and soils, yet its recent discovery & tremendous value is now just beginning to be recognized

EDDHA-Fe



Common name	EDDHA-Fe
Description	Dark reddish brown

EDDHA- Fe is an Iron Micronutrient for Iron Deficiency applicable in a **pH range of 3 to 11**. For preventive treatment, lower application rates are sufficient. Higher application rates are recommended for crops that are highly susceptible to iron chlorosis & or on soils with a high pH rich in carbonates.

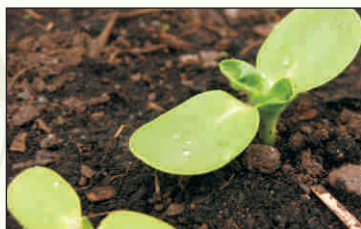
Normally one application per vegetation period is sufficient. Foliar application is not recommended.



# PLANT GROWTH REGULATORS

Plant Growth Regulators are any substance or mixture of substances intended, through physiological action, for accelerating or retarding the rate of growth or maturation or for otherwise altering the behavior of ornamental or crop plants or the produce thereof, but not including substances intended as plant nutrients, trace elements, nutritional chemicals, plant inoculants, or soil amendments.

Plant growth regulators also known as growth regulators or plant hormones, these are chemicals used to alter the growth of a plant or plant part. Hormones are substances naturally produced by plants, substances that control normal plant functions, such as root growth, fruit set and drop, growth and other development processes.



It helps to increase of fruit size.

Plant growth regulators alter hormone responses to control plant functions, including the plant's growth and development. The regulators work on plant hormones, many of which serve multiple functions. For this reason, a single plant regulator used by agriculturalists or horticulturalists can either provide several benefits or have a single benefit with unintended drawbacks.

## Horizon offers in PGR series

### ABSCISIC ACID

Absciscic acid also known as ABA, facilitates the sloughing off of fruits, flowers, leaves and sometimes small buds & branches. This shedding process is vital to homeostasis in the plant's relationship to the environment and within the plant itself. The shedding action permits dispersal of seeds & other reproductive structures & it returns plant-based nutrients to the soil. Within the plant, aging, injured, diseased parts are removed and the various parts of the plant organism are kept in balance.

### Nitrobenzene Tech (Formulated 20%)

Nitrobenzene,  $C_6H_5NO_2$ , very poisonous, flammable, pale yellow, liquid aromatic compound with an odor like that of bitter almonds. It's formulations are used as flowering agents & stimulators.

### IAA / IBA Indole-3-butyric acid

IBA are commonly applied to stimulate root growth when taking cuttings of plants or yet for different agricultural application as is the prevention of fruit drop in orchards.

### Ga3 Gibberellic Acid-3

(GA-3) is a naturally occurring plant growth regulator which may cause a variety of effects including the stimulation of seed germination in some cases. It increases fruit quantity & size.

### CPPU (Forchlorfenuron, KT-30)

It is use as a plant growth regulator widely used in agriculture horticulture and fruits to increase fruit size, e.g. kiwi fruit and table grapes, to promote cell division, to improve the quality of fruits and to increase yields.

### NATCA N - Acetyl Thiozolidine 4 Carboxylic Acid:

These are widely demanded in agri industry for giving resistance power to plants, which helps them to grow in poor cultivating condition. ATCA treated plants show a greater resistance to bad growing conditions, since the bio stimulator helps the plant to overcome critical periods throughout the entire growing cycle.

### CHITOSAN

Chitosan is a natural bio-polymer which stimulates growth and increases yield of plants as well as induces the immune system of plants. It is a natural bio-polymer modified from chitin, which is the main structural component of squid pens, cell walls of some fungi, shrimp & crab shells.

### P205 Phosphorus Pentoxide.

Phosphorus is an important agricultural fertilizer, an essential element in metabolism & the transfer of biological energy, a component of matches, an ingredient in pyrotechnic applications, and besides of considerable scientific interest.

### 6BA Cytocell 6-Benzylaminopurine

It is a wide spectrum plant growth regulator. 6-BA is the first synthetic cytokines, a class of growth regulator that promotes cell division. When used with gibberellins, fruit's shape can be improved. cell division; lateral bud emergence (apples, oranges) basal shoot formation (roses, orchids) flowering (cyclamen, cacti) fruit set (grapes, oranges, melons).

### BRASSINOLIDES

Accelerated cell division and cell elongation, increases diameter, weight & size of fruits. When used in combination with GA gives best results. Cell wall expansion takes place. Improves the fertility of reproductive organs when used at flowering stage. Increase photo synthetic activity. It keeps fruit green for longer time. Seed weight increases, bolder seeds are produced. Increase in plants resistant powers towards disease and harsh condition. It helps plant to over come phyto toxicity effect of other chemicals.

### KINETINE

kinetin is one of a group of chemically similar plant hormones, the cytokines, that promote cell division. In some instances kinetin acts together with another hormone, in dole acetic acid, or auxin; in other cases it acts in opposition to auxin. Kinetin is useful for Grain filling and partitioning. Delayed senescence.



## Food as Medicine

Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. It combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.



It is a system that begins to consider potential environmental and social impacts by eliminating the use of synthetic inputs, such as synthetic fertilizers and pesticides, veterinary drugs, genetically modified seeds & breeds and irradiation. These are replaced with site-specific management practices that maintain & increase long-term soil fertility and prevent pest & diseases.

### Advantages of Organic Products:

- | Sustainability over the long term.
- | Supplement organic soils with potassium, phosphate, calcium, magnesium and trace elements from external sources.
- | Increase the return of carbon to the soil, raising productivity and favoring carbon storage.
- | Organic products are taking the precautionary approach and choosing to encourage natural biodiversity.
- | Genetically modified organisms.

## PEST & DISEASE CONTROL SERIES

### *Food To Be Medicine*

#### Kidadas - Organic insecticide



Cabbage damaged by diamondback moth

Kiddas is an **organic insecticide** developed to control wide range of insect pest. It is a Contact Poison applicable to various Horticultural crops, Lawns, field crops, Vegetables like cabbage, cauliflowers etc.

#### Mode of action

- ◇ It exhibits various Behavioral Responses such as **Antifeedant, Feeding Deterrent, Repellent, Ovipositor Deterrent etc.**, & Physiological Responses such as **Molting Inhibitor, Reproduction Inhibitor, Antifertility etc.**

#### Method of application

- ◇ To control a broad spectrum of fungicides
- ◇ **Organically** derived hence very safe to environment, livestock & human beings
- ◇ **No** pesticide resistance developed hence repetitive applications possible
- ◇ **Very** low dosage
- ◇ **Best** results are obtained by applying it preventively and in the early stages of the disease.

**Dosage:** 2ml per liter

## Food To Be Medicine

### Fungill Super P - Systemic fungicide



Downy mildew of grapevines

A systemic fungicide developed to control major diseases like Downey mildew, Root rot, Late blights, Purple blotch etc caused by Phytophthora.

#### Mode of action

- ◇ Fungill gets translocated in the roots to act against root rot.
- ◇ Both direct and an indirect effect on oomycetes.
- ◇ It inhibits the metabolism by oxidative phosphorylation.
- ◇ Indirect effect by stimulating the plants natural defense response against the pathogen attack.
- ◇ Accumulation of phytoalexins (immune bodies), Lignifications & cell wall fortification occur.
- ◇ Lytic enzymes are also produced by the plants which in conjunction with rest of the plants response cause death of the disease.

#### Method of application

- ◇ Apply FUNGILL SUPER systemic Fungicide by various application methods, including foliar spray, soil drench, soil in co-operation & bare root dip.
- ◇ For foliar sprays, apply FUNGILL SUPER systemic Fungicide with sufficient water volumes for adequate coverage of foliage, according to plant type and growth stage. To ensure good coverage, spray to wetness, but avoid run-of.

**Dosage:** 3 to 5 ml / Liter;  
300 to 550 ml /acre

### Cupraxe – The Copper effect



Powdery mildew of tobacco

**Cupraxe** is a copper based Organic broad spectrum fungicide. It will control a wide variety of diseases on vine crops such as melons & cucumbers in addition to potatoes, tomatoes and roses. Specifically, Cupraxe is effective against leaf spot, anthracnose, black spot on roses and tomatoes as well as downy & powdery mildew.

#### Mode of action

- ◇ Contact fungicide, hence ensure thorough wetting of plant and affected areas.
- ◇ Forms irreversible combinations with the proteins of the fungi to initiate denaturalization process
- ◇ leads to stop of growth and metabolism of the fungi eventually leading to its death.
- ◇ Provides a water resistant cover and hence long action.

#### The product enables

- ◇ Organically derived hence very safe to environment, livestock & human beings.
- ◇ No pesticide resistance developed hence repetitive applications possible.
- ◇ Copper based product hence improves the copper availability to plant.
- ◇ Very low dosage
- ◇ As the product has nutritive effects also, best results are obtained by applying it preventively and in the early stages of the disease.
- ◇ Provides shine to the fruit & vegetables.

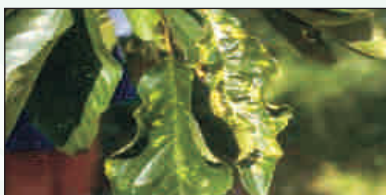
#### Dosage - Powder form :

3 gm / liter of water /

#### In liquid form :

750 ml to 1 L / 100 lit of water

### VK's Whip – Disinfectant & Bactericide



Cherry mottle leaf virus

**VK's Whip** is a biological bactericide kill and prevent the bacteria, Fungi, Virus, such as downy mildew, Xanthomonas, Gray mildew, fusarium wilt, blight, anthracnose, powdery mildew, leaf spot, bacterial soft rot, mosaic and so on. It also acts as disinfectant.

#### Benefits

- ◇ Kill and prevent the bacteria, Fungi, Virus, such as downy mildew, gray mildew, fusarium wilt, blight, anthracnose, powdery mildew, leaf spot, bacterial soft rot, mosaic & so on.
- ◇ Have the good stability, efficient result & no residue.
- ◇ Improve the plants growing, improve crops quality, increases the yield.

#### Note –

- ◇ Can not be used for leguminous plants.
- ◇ Do not mix applying with Metallic, Reducer, Strong Oxidant and alkaline products.

#### Application

- ◇ For guard against: To dilute it with water for 1000-1200 times. Foliar spraying, apply every 10-15 days.
- ◇ For remedy: To dilute it with water for 500-800 times. Foliar spraying, apply every 5-7 days (for the virus, spray one time every 3-5 days), continuing spraying 3 times.

**Dosage –** 2ml per liter

## Food To Be Medicine

### VK's Nemo - Bio Nematicide



Tomato with root knot nematodes

**VK's Nemo** is a **biological nematicide** used in controlling pathogenic nematodes in turf, horticultural and agricultural applications. It has the correct balance of naturally occurring aldehyde, ketones and Linolenic Acids which when applied correctly can reduce damaging nematode populations.

#### Mode of action

The mode of action is both systemic and contact type –

- ◊ Completely prevents the hatching of the pests/insect eggs in the soil
- ◊ Also enriches the soil natural nutrients.

**Dosage** - Apply 5-10 kg per acre (according to severity of Nematodes infestations) before sowing or with first dose of fertilizers.

#### Method of application

- ◊ **Seed treatment and Soil application** - 100% organic nematicide to be useful for all crops including commercial crops, horticulture, vegetables and floriculture crops.
- ◊ It is widely used by polyhouse & greenhouse owners.
- ◊ Its unique ability to control harmful parasitic nematodes while not harming the environment may show to be a great alternative to common chemical nematicides.

### VK's Brasso - Natural Growth Promote



Powdery mildew of tobacco

**VK's Brasso** is a natural **Growth Promoter** alternative to gibberellic acid. It induces cell elongation and cell division; increases tolerance to stress due to temperature, water or salinity; acts to protect against pesticides and increase crop yields in wheat, barley, corn, lettuce, potato, soybean, bean, melon, grapes, grapefruit, orange, sugar beet, apple & spinach. It act as steroid hormone and triggers physiological processes in the plant their by helps to promote cell division, cell elongation.

#### Features -

- ◊ Promotes growth, increases yield, & improves quality.
- ◊ Increases the % of fruit setting,
- ◊ promotes fruit's enlargement.
- ◊ Improves ability of disease resistance.
- ◊ Regulates callus differentiation in tissue culture.
- ◊ Increases activity of seed germination.
- ◊ Applying 10-15 days before harvesting can prolong keeping quality of Vegetables, Fruits and Flowers.
- ◊ Spraying before flowering can promote the formation of flower buds.
- ◊ Spraying during flowering stage can resist fruit dropping and flower dropping.

#### Recommendation -

- ◊ Avoid using with alkaline pesticides, may use with neutral or weak acidic pesticides.
- ◊ It is broad spectrum product with no side effects even in higher doses.

**Dosage** - 2ml per 100 liter

### VK's Grow gold - Organic Biofertilizer



Biofertilizer constructive for root

It is a 100 % organic biofertilizer. Its beneficial applications cover an broad spectrum of plantation which will encompass more than 70% of the plant kingdom. It increases crop yield by enhancing root system & increasing nutrient uptake.

#### Benefits

- ◊ Increases & balance nutrient uptake
- ◊ More foliage and better flower formation
- ◊ Higher survival rate during prolonged stress condition
- ◊ Good keeping quality
- ◊ Cut down chemical use

VK's Grow gold is natural and organic fertilizer that helps to keep in the soil with all the nutrients and live microorganisms required for the benefits of the plants.

#### Application

- ◊ Seedling Dip
- ◊ Soil drenching
- ◊ Foliar spray

#### Functional Mechanism -

- ◊ When applied to seed or soil VK's Grow gold increases the availability of nutrients and improves the yield by 10 to 20% without adversely affecting the soil and environment.
- ◊ VK's Grow gold produce hormones & anti metabolites which promote root growth. Decompose organic matter & help in mineralization in soil. It helps to fix atmospheric nitrogen in the soil & solubilise the insoluble form of phosphorus like tricalcium, iron & aluminum phosphate & make it available to plants.

**Dosage:** 100 g/acre



## PROCESSING AIDS

To maximize performance, the pesticide or herbicide must come in contact with the target. The efficiency of the product increases with increase in area of contact. *our spreader* reduces the surface tension of water causing water droplet to spread out. When water falls on water repellent waxy surface (hydrophobic) of the plant leaf, it tends to remain on the surface in the form of tiny droplets (beads) covering the minimum surface area.

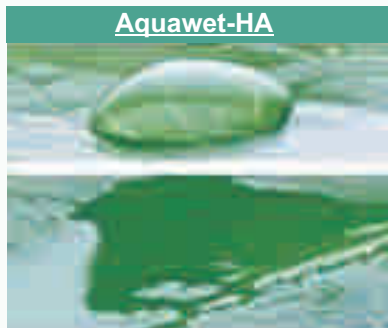
This means the water droplets do not spread out evenly over the leaf surface leading to poor wetting of the leaf surface. Since water is the liquid carrier of the herbicides / pesticides, this beading limits the coverage and the effectiveness of the herbicide being used. When the pesticides are dissolved in water containing *our spreader* & sprayed on plant, it spreads out more evenly; the result is much better pesticide coverage. Adding *our spreader* also helps pesticide or herbicide to penetrate the surface of the leaf and soil faster and more evenly.

### Benefits of Using Our Spreaders

- ◇ Cost effective solution to reduce the consumption of insecticide & pesticide by its uniform spread.
- ◇ Increases farm yield by enhancing the effectiveness of insecticide, pesticide or any other foliar application.
- ◇ Enhances water penetration into the soil. Aids irrigation & keep equipment clean, prevents clogging of nozzles.
- ◇ Effective as spreader and as an activator. Helps keep pesticides in suspension.

Various spreaders to suit individual requirements for ionic / anionic way & various properties required are given below.

#### Aquawet-HA



**Aquawet - HA** is silicone based technical spreaders. It has been widely accepted by the farmers due to the best multifarious results, through various sprays and drip irrigation.

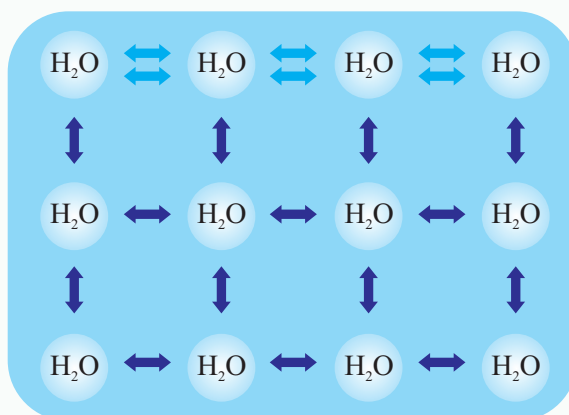
**Aquawet-HA** has unique action of wetting, spreading and penetration. It makes the spraying solution homogeneous.

**Aquawet-HA** is an all purpose spray adjuvant that can be used with pesticides, fungicides, weedicides, growth substances like GA3, 6BA, NAA, CCC etc. & all kinds of major and minor nutrients. When used in spray solutions it increases the effectiveness of the ingredients of the solution.

**Aquawet-HA** does not allow the spray to get washed out even on rainy days because of its excellent qualities. It has shorter drying time resulting in reduced rainfall degradation.

#### Maha Bachat

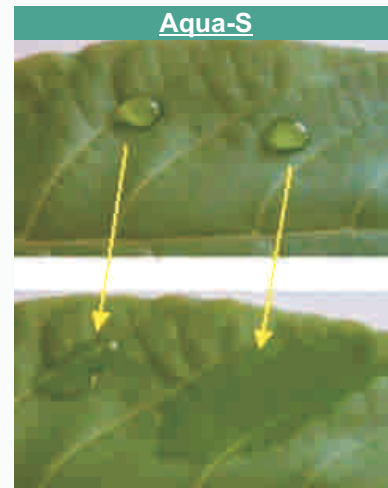
**Mahabachat** is a unique nonionic surface active adjuvant helps in increasing crop yield by improving the performance of the foliar applicant.



#### SURFACE TENSION:

*Molecule at the surface form stronger bonds.*

#### Aqua-S



**Aqua-S** is an all Purpose Spray. It promotes faster and more even soil penetration reduces water evaporation and run-off.

**Aqua-S** is helpful to Improves performance of herbicides, fungicides, and insecticides.

**Aqua-S** Reduces surface tension in plant leaves and compact soils, promoting a more uniform spray deposit, it also improving plant coverage and penetration.

It improves the uptake of the active ingredient by the plant.

#### Thickening Agents

Tailor made for Nitrobenzene, bio pesticides, organic formulations etc.

#### Dipping Oil

To convert fresh fruits into dry fruit is technology by it self. This technique is used in many fruits such as Grapes are converted into dry raisins. Figs are dried and sols. This is achieved by reduction of maximum moisture from fruit in minimum possible time.

#### Antifungal Agent for

Amino acids, Seaweed formulations & Bio pesticides

**Itemcode** - PRESERVATIVE 0102

**Active ingredient** - 99.5 %

**Solubility in water** - Completely soluble.

**Physical appearance** - White crystalline powder.

## Food as Medicine

### PEST & DISEASE CONTROL SERIES

#### *Food To Be Medicine*

Our overall approach to pest management is to make the plant inherently strong to prevent any infestation of pests & diseases. Most of our formulations are curative along with provision of essential nutrients.

With close cooperation with scientist from USA we are pleased to present following products:

NAME OF PRODUCT	CROPS APPLICABLE	TARGET DISEASE / PEST
<b>Kidadas Organic insecticide Contact Poison</b>	Horticultural crops, Lawns, field crops, Vegetables –cabbage, cauliflowers etc.	Thrips, aphids, armyworm, corn rootworm beetle, cockroaches, Tobacco budworm.
<b>Fungill Super P Systemic fungicide</b>	Grapes, tomatoes, leafy vegetables, paddy, potato, onion, garlic, cucumber, melon etc	Downey mildew, root rot, Blights, Purple blotch, diseases caused by Phytophthora
<b>Cuprax Organic broad spectrum fungicide Very low dosage</b>	Fruit trees like grapes, mango, apple, orange, Flowers, Vegetables, Field crops	Powdery mildew, Drooping disease, Leaf rust, Foot rot
<b>VK's Grow gold Organic Biofertilizer</b>	Covers more than 70 % of the plant kingdom. Seed treatments, tissue culture, vegetables, fruit trees	Rooting treatment, Seed treatments, good keeping quality, product shine
<b>VK's Whip Disinfectant , Bactericide</b>	Fruit crops, Green house plants	Botrytis, Fusarium, Xanthomonas, Powdery & Downey mildew, Blights
<b>VK's Probe Probiotic mixture for soil Beneficial fungi and bacterial strains</b>	All green leafed plants and vegetables. Hard, lifeless and damaged soils. Drastically reduce fertilizer and pesticidal consumption	To make all the nutrients in bio available form. Improves soil health, texture and quality Boost microbial growth
<b>VK's Brasso Growth Promoter</b>	All type of horticultural, floricultural, field crops, vegetables, tissue culture etc.	An natural alternative to gibberellic acid . It triggers physiological processes to provide higher yields, promotes cell division , cell elongation and tolerance to stress.
<b>VK's Nemo</b>	Vegetables, field crops, Seed sprouting crops, ornamental crops, fruit trees , cotton, cucurbits etc.	Seed treatment and Biological control for nematodes



**Corporate Off. :** 76, "Sarthak"  
Bajirao Nagar, Tidke Colony,  
Nashik - 422 008,  
Maharashtra, India.

Tel: +91 253 2318788,  
Tel: +91 253 2318798,  
Tel: +91 253 6533750  
Fax: +91 253 2571577

E-mail: [horizonagrotech@gmail.com](mailto:horizonagrotech@gmail.com)  
E-mail: [info@horizonagrotech.com](mailto:info@horizonagrotech.com)  
Website: [www.horizonagrotech.com](http://www.horizonagrotech.com)

to help you deliver finest chemical solutions,

always ahead !