



*More yield,  
more Happiness*



URS is a member of Registrar of Standards (Holdings) Ltd.

## **MICRO CHEMICALS INDIA**

**ISO 9001-2008 certified company**

59, Dr. B. C. Roy Rd., Shyamnagar,  
North 24 PGS-743127, West Bengal.

Phone : 03325618181/03325860143

Fax : 03325862210

Website : [www.microchemicalsindia.com](http://www.microchemicalsindia.com)

## Micro Chemicals India

Indian agriculture is largely ignorant of nutrients beyond NPK. Few farmers are aware that small quantities of micronutrients could dramatically increase production, while reducing a much higher amount of applied NPK. Micronutrients could thus save money and protect the ecology while increasing crop yield and quality.

Micro Chemicals India was set up in 1985 to explore the emerging world of micronutrients. This was a pioneering venture for Eastern India.

Today 'Plantaidd' and 'Chelazin' are the dominant brands trusted by a large and growing population of farmers. The concept of micronutrients has spread widely and our range of products has grown with demand, with single micro and secondary nutrients, combination micronutrients and soil conditioners. In the process the team has also gained the trust of forests and governmental agricultural and horticultural departments. The MCI team commands markets throughout the West Bengal & North Eastern states plus Odisha, Bihar and Jharkhand.

### **Our MISSION: "More yield More Happiness"**

Micro Chemicals India has a strong research focus with sophisticated laboratories, large field trial facilities as well as modern manufacturing facilities manned by experienced teams and backed by a heavy-duty marketing network.

The basic corporate focus is on:

1. Uncompromising quality control
2. Dedicated marketing support
3. Continuing product development.
4. Be with the farmers with **newer nutrient and farm management** technologies.

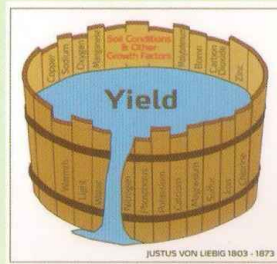




### A. Components of Balanced Plant Nutrients (BPN):

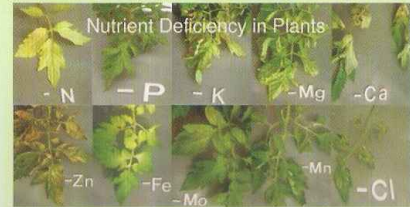
Non mineral	<b>C</b> carbon	<b>H</b> hydrogen	<b>O</b> oxygen
Mineral			
Primary	<b>N</b> nitrogen	<b>P</b> phosphorus	<b>K</b> potassium
Secondary	<b>Ca</b> calcium	<b>Mg</b> magnesium	<b>S</b> sulfur
Micro	<b>B</b> boron	<b>Cl</b> chloride	<b>Cu</b> copper
	<b>Fe</b> iron	<b>Mn</b> manganese	<b>Mo</b> molybdenum
	<b>Sr</b> silicon	<b>Na</b> sodium	<b>Zn</b> zinc

### B. Law of the Minimum



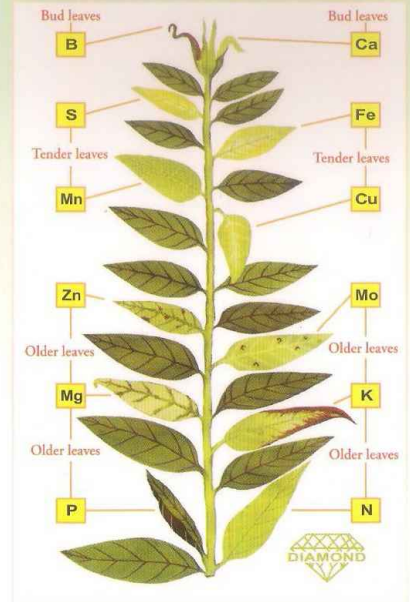
"If one nutrient is deficient, plant growth is limited..." (J. V. Liebig, 1873)

### D. Deficiency symptoms of plant nutrients on leaves



### C. Micro and Secondary nutrients: Crucial functions in plant systems

<b>Calcium:</b>	Helps translocation of photosynthesis from leaves to fruiting organs
<b>Magnesium:</b>	Key element of chlorophyll production
<b>Sulphur:</b>	Integral part of amino acids and enzymes.
<b>Boron:</b>	Essential for growth of pollen tubes and seed formation
<b>Zinc:</b>	Helps synthesis plant growth hormones and enzyme system
<b>Copper:</b>	Catalyzes several plant processes and has antifungal activity
<b>Manganese:</b>	Functions as a part of enzyme systems and has antifungal activity
<b>Molybdenum:</b>	Required to form the essential enzyme "nitrate reductase"
<b>Iron:</b>	Acts as an oxygen carrier
<b>Chlorine:</b>	Enhances maturity of small grains on some soils



## Combination Micronutrients

Brand Name	Technical	Dosage and method of application						Available Packing
		Vegetables Crops	Cereal Crops	Tuber Crops	Pulses and Oil seeds	Fiber Crops	Fruits, Horticultural Crops and Bittlevine	
<b>Plantaid Liquid</b>	Combination of Zinc, Boron, Mg, Cu, Mn, Mo as per State Govt. notification in Liquid form	3 Foliar Spray @ 2ml/lt. @ 21 days interval	-	-	2 Foliar Spray @ 2ml/lt. @ 21 days interval	2 Foliar Spray @ 2ml/lt. @ 21 days interval	2 Foliar Spray @ 2ml/lt. @ 21 days interval	100ml, 250ml, 500ml, 1lt.
<b>Plantaid Soil</b>	Combination of Zinc, Boron, Manganese and Copper as per State Govt. notification	Soil application: 5kg/acre during land preparation or during first broadcasting with major fertilizers.						1kg pouch packet, 5kg bag
<b>Plantaid Super</b>	Combination of Zinc, Boron, Mn, Cu, Mo as per State Govt. notification in water soluble powder form	3 Spray @ 2g/lt. @ 21 days interval.	-	3 Spray @ 2g/lt. @ 21 days interval.	-	-	3 Spray @ 2g/lt. @ 21 days interval.	100g, 250g, 500g, 1kg.
<b>Plantaid Special</b>	Combination of Zinc, Boron, Mo as per State Govt. notification in water soluble powder form	3 Spray @ 2g/lt. @ 21 days interval.	-	3 Spray @ 2g/lt. @ 21 days interval.	-	-	3 Spray @ 2g/lt. @ 21 days interval.	100g, 250g, 500g,



Plantaid Liquid



Plantaid Soil



Plantaid Super



Plantaid Special

Brand Name	Technical	Dosage and method of application						Available Packing
		Vegetables Crops	Cereal Crops	Tuber Crops	Pulses and Oil seeds	Fiber Crops	Fruits, Horticultural Crops and Bittlevine	
<b>Plantaid Mango Special</b>	Combination of Zinc, Boron and growth stimulator in liquid form	-	-	-	-	-	3 Foliar Spray @ 2ml/lt. @ 21 days interval- (I. Before inflorescence, II. 21 days after inflorescence, III .During fruit ripening)	1lt bottle, 5lt. jar
<b>Plantaid Potato Special</b>	Combination of Boron, Zn, Mo, Cu, Mn in water soluble crystalline form	-	-	3 Spray @ 2g/lt. @ 21 days interval.	-	-	-	250g, 500g
<b>Chelazin Foliar Spray</b>	Combination of zinc and Boron as per State Govt. notification in water soluble powder form	-	2 foliar spray @ 2g/lt. @ 21 days interval.	-	2 foliar spray @ 2g/lt. @ 21 days interval.	2 foliar spray @ 2g/lt. @ 21 days interval.	-	100g, 200g, 500g
<b>Chelazin Plus Soil</b>	Combination of Zinc, Boron, Cu as per State Govt. notification	Soil application: 5kg/acre during land preparation or during first broadcasting with major fertilizers.						1kg pouch packet, 5kg bag
<b>Chelazin Liquid</b>	Combination of Zinc and Boron as per State Govt. notification in Liquid form	3 Foliar Spray @ 2ml/lt. @ 21 days interval	2-3 Foliar Spray @ 2ml/lt. @ 21 days interval	-	2 Foliar Spray @ 2ml/lt. @ 21 days interval	-	2 Foliar Spray @ 2ml/lt. @ 21 days interval	100ml, 250ml, 500ml, 1lt.



**Plantaid Mango Special**



**Plantaid Potato Special**



**Chelazin Plus Soil**



**Chelazin Foliar Spray**



**Chelazin Liquid**



### Single Micro and Secondary nutrients

Brand Name	Technical	Dosage and method of application						Available Packing
		Vegetables Crops	Cereal Crops	Tuber Crops	Pulses and Oil seeds	Fiber Crops	Fruits and Horticultural Crops	
Chelazin	Zinc(12%)-EDTA chelate	2 foliar spray @ 1g/lit @ 21days interval						50g, 100g, 250g, 500g
Micro Zinc 21	Zinc Sulphate 21%	Soil application: 7-10kg/acre	Soil application: 10kg/acre	Soil application: 10kg/acre	Soil application: 7-10kg/acre	Soil application: 5kg/acre	Soil application: 7-10kg/acre	1kg, 2kg, 5kg
Micro zinc 33	Zinc Sulphate 33%	Soil application: 4-6kg/acre	Soil application: 6kg/acre	Soil application: 6kg/acre	Soil application: 4-6kg/acre	Soil application: 3kg/acre	Soil application: 4-6kg/acre	1kg, 2kg, 5kg
Plantaid Boron	Boron 10.5%	Soil application: 3kg/acre during manuring or last plowing						500g, 1kg.
Boromax	Boron 20%	3 foliar spray @ 1g/lit @ 21days interval	2 foliar spray @ 1g/lit @ 21days interval	2 foliar spray @ 1g/lit @ 21days interval	2 foliar spray @ 1g/lit @ 21days interval	2 foliar spray @ 1g/lit @ 21days interval	2 foliar spray @ 1g/lit @ 21days interval	100g, 250g, 500g, 1kg
Plantaid Magnesium	Magnesium Sulphate Hepta hydrate	Foliar Spray: 3g/lt. or Soil Application as per Govt. recommendations.						500g, 1kg

Chelazin



Micro Zinc-21



Micro Zinc-33



Plantaid Boron



Boromax



Plantaid Magnesium



Brand Name	Technical	Dosage and method of application						Available Packing
		Vegetables Crops	Cereal Crops	Tuber Crops	Pulses and Oil seeds	Fiber Crops	Fruits, Horticultural Crops and Bittlevine	
<b>Plantaid Nutrisulf-L</b>	Water soluble Liquid Sulphur 22% (min.)	3 foliar spray @ 3ml/lit @ 21 days interval	2 foliar spray @ 3ml/lit @ 21 days interval	2 foliar spray @ 3ml/lit @ 21 days interval	3 foliar spray @ 3ml/lit @ 21 days interval	2 foliar spray @ 3ml/lit @ 21 days interval	3 foliar spray @ 3ml/lit @ 21 days interval	100ml, 250ml, 500ml, 1lt.
<b>Plantaid Alright</b>	Calcium based secondary nutrient. Combination of Calcium:18.8%, Nitrogen (in nitrate form): 15.5%	2 foliar spray @ 5g/lit. @ 10 days interval	-	2 foliar spray @ 5g/lit. @ 10 days interval	-	-	2 foliar spray @ 5g/lit. @ 10 days interval	500g

#### Soil Amendments

<b>Plantaid Soil Conditioner</b>	Calcium and Magnesium Carbonate	Soil application: 60kg/acre	5kg, 10kg
----------------------------------	---------------------------------	-----------------------------	-----------

#### Root Growth Enhancer

<b>Microdex</b>	Indole acetic acid, Indole butyric acid, Naphthyl acetic acid	1.Seed treatment: 2g/kg seed (Fix the volume of water depending on seed volume). 2.Seedling deep (For Vegetable crops and Horticultural crops only): Dip the root of seedling in Microdex Solution @ 1g/lit. for 10 minutes and transplant.	50g, 100g, 500g
-----------------	---	--	-----------------

#### Fish nutrient

<b>Plantaid Nutrifiish</b>	Combination of Zn(6%), B(0.8%), Mn(3%), K(6%), Ca(0.5%), Mo(0.03%), Co(0.002%) in water soluble powder form	Dissolve 250g Nutrifiish in 50lt. water and apply into a volume of 150 M <sup>3</sup> water body. First application: when the fish will attain a body mass of 50g. Second application: After 60 days of first application.	1kg, 5kg
----------------------------	---	--	----------



**Plantaid Nutrisulf-L**



**Plantaid Alright**



**Plantaid Soil Conditioner**



**Microdex**



**Plantaid Ntrifiish**

