

PHENOMIC EVIDENCE ABOUT GREENBELT

A test for evaluating the effectiveness of GREENBELT has been performed at the research centre Metapontum Agrobios, the first in Italy and the largest in Europe, that uses the platform technology (Scanalyzer 3-D System). This cutting edge equipment allows the monitoring and the study of plant development and its variations, with respect to the environment and genotype. The 3-D Scanalyzer allows for evaluation of, in a scientific and objective way, the response of plants to the products, while maintaining all other parameters (temperature, soil moisture, light, nutrition, etc ..).

GREENBELT has been tested with RGB technology (Red-Green-Blue) that can assess the biomass and the color of foliage through the System Lemnatec Scanalyzer 3-D. GREENBELT was tested compared with an iron chelate EDDHA 4.8 o-o and an untreated control; the products were used at the recommended rate according to the label on young potted plants. GREENBELT increased digital biomass (1) and the green spectrum (2) toward the dark green color more than the iron chelate 4.8 and the untreated control.

RESULTS OF SYSTEM LEMNATEC SCANALYZER 3-D



Source: Metapontum Agrobios

WHY USE GREENBELT?



GREENBELT

TURN YOUR PLANT GREEN



THE NEED: TO SOLVE CHLOROSIS

The term chlorosis means a general yellowing of the leaves. The leaf chlorosis is generated by several factors but, generally, we tend to attribute the cause only to iron.

Nevertheless, it frequently happens that the chlorosis depends not only on iron availability, but is often due to a **combined deficiency of iron and manganese**. So even if we apply iron chelates, chlorosis does not disappear completely.

The cause is due to an imbalance of the iron/manganese ratio (which shows symptoms similar to iron deficiency). **In these situations, the application of iron chelate will not completely resolve the chlorosis.**



Manganese deficiency after iron chelate application

GREENBELT: A MULTISTRATEGIC APPROACH TO SOLVE CHLOROSIS

GREENBELT is an innovative product obtained through the GEAPOWER technology (GEA 098) and represents an effective solution to the problem of chlorosis, especially in cases in which iron is not solely responsible for chlorosis. **The solution of chlorosis is achieved thanks to a triple action of the product:**

- a balanced ratio Fe / Mn
- chelated iron with chelating agents EDDHA and EDDHSA
- biologically active ingredients that will improve and enhance root absorption of iron and manganese.

Regularly **used during the vegetative and reproductive growth stages**, when the root system actively absorbs nutrients, GREENBELT helps to overcome the problem of leaf yellowing caused by deficiencies or an unbalanced **ratio of iron / manganese**.

GREENBELT is designed to prevent or treat situations of chlorosis on all crops, especially those more sensitive to the problem. The use of GREENBELT is also good in applications of **post-harvest period on perennial crops** (pome fruit, stone fruit, citrus fruit, kiwi and grapes) with the purpose of storing the iron in the plant until the following year.

FUNCTIONAL USES

	FE-EDDHA	FE-EDDHSA	MN EDTA	K2O	BIOLOGICALLY ACTIVE INGREDIENT
PREVENT OR SOLVE CHLOROSIS	X	X	X	X	
PHOTOSYNTHETIC ACTIVITY IMPROVED	X	X	X		X
OPTIMAL BALANCE OF FE/MN RATIO	X	X	X		
IRON AND MANGANESE UPTAKE IMPROVED THROUGH THE ROOT SYSTEM				X	X

HOW GREENBELT WORKS: TRIPLE ACTION TO SOLVE CHLOROSIS

GREENBELT is the superior solution to chlorosis through combined and synergistic actions between:

- IRON** INVOLVED IN SEVERAL METABOLIC FUNCTIONS IMPORTANT FOR THE PLANT: PHOTOSYNTHESIS AND RESPIRATION, CHLOROPHYLL SYNTHESIS, PROTEIN METABOLISM
- POTASSIUM** EXERTS A POSITIVE SYNERGISM PROMOTING ABSORPTION OF BOTH IRON AND MANGANESE AT THE ROOT LEVEL
- MANGANESE** PARTICIPATES IN THE ACTIVATION PROCESS OF ENZYME SYSTEMS, PHOTOSYNTHESIS, RESPIRATION, CONTROL OF HORMONAL ACTIVITY AND PROTEIN SYNTHESIS
- BIOLOGICALLY ACTIVE INGREDIENTS** COMPLEX OF BIOLOGICALLY ACTIVE COMPONENTS THAT ACT DIRECTLY ON THE ROOT, INCREASING LEVELS OF ABSORPTION OF IRON AND MANGANESE, AND IMPROVING THE CHLOROPHYLL CONTENT OF THE LEAF

COMPOSITION

CHELATING AGENT	FE WATER SOLUBLE	CHELATED FRACTION	IRON PERCENTAGE IN ORTHO-ORTHO ISOMER	MN EDTA WATER SOLUBLE	POTASSIUM OXIDE K2O
EDDHSA/ EDDHA	6.0 %	100 %	1.0 % EDDHA 3.0 % EDDHSA	1.0 %	6.0 %

PHYSICAL PROPERTIES

FORMULATION	pH (IN SOLUTION)	SOLUBILITY (g/100 ml) 20 °C	COLOR	CONDUCTIVITY E.C. -1‰ (mS/cm) 18 °C
SOLUBLE MICROGRANULES	7.6	8	BLACK	0.59

DIRECTIONS FOR USE

APPLICATION PROCEDURE	FERTIGATION							
	APPLE AND PEAR lbs/a	STONE FRUIT lbs/a	STRAWBERRY lbs/a	CITRUS lbs/a	TABLE GRAPE lbs/a	KIWI lbs/a	VEGETABLES/ EXTENSIVE CROPS lbs/a	FLOWERS CROPS oz/sq ft
CROPS								
RATE	5-15	5-15	5-15	5-15	5-15	5-15	5-15	4-6 / 1000

The intervals between applications are based on the vegetative mass of the plants and the severity of the chlorosis.



Valagro is a leader in the production and commercialization of bionutritionals and specialty nutrients for use in agriculture, gardening, and industrial applications. Founded in 1980 and headquartered in Atesa, Italy, Valagro is committed to providing innovative and effective solutions for plant nutrition and care. Its mission is to increase the quantity and quality of plants and harvested crops while enhancing productivity and reducing the environmental impact of cultivations.



GEAPOWER INNOVATION

Using science to harness the potential of Nature with an eye toward environmental sustainability:

This is the principle behind GeaPower, the exclusive technology platform developed by Valagro to turn potential active ingredients into high-quality nutrient solutions. A technology based on four fundamental concepts:

- Deep knowledge of active ingredients and raw materials
- Selection of the extraction methods of active ingredients
- Cutting edge investigations and analytical skills
- Proven ability to provide effective solutions to the customer's requirements